

Coin, Currency and Commerce

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COIN, CURRENCY AND COMMERCE

**An Essay in Exposition of their Actual Relations
and Containing Outlines of
Monetary Theory**

BY

PHILIP A. ROBINSON



**WASHINGTON
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Inscribed
to the Memory of
ALEXANDER HAMILTON
Chief Author of the Constitution of the United States
and the
FIRST FINANCE MINISTER
under that Frame of Government.

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PREFACE.

In the second half of the nineteenth century there has been an incessant agitation of all questions of monetary science and national finance. The large developments in mining money material have in great part occasioned this many-sided discussion, and have led to some innovations in monetary theory. In particular, those developments in their production have led to a fresh going-over of the relations of the two leading money metals,—in connection with the progress of international affairs, to proposals for an international currency, and, indeed, to the formation of certain groups of states into monetary unions.

The effect, however, of all the experience of the period has been not to disturb, but to confirm, the principles and general laws of monetary science; the body of the science, though elaborated and reduced to form by Mill and Jevons and Walker, remains essentially as it was understood by Locke, Newton and Hamilton. This science, taken comprehensively and in view of all its relationships, constitutes a large and intricate department of economics; it has exercised some of the acutest minds that the world has known—Aristotle, Copernicus, Newton, Mill. As a study it becomes even more arduous and complicated through the accumulation of masses and mazes of pertinent statistics.

By thought, however, it is still possible for any one to understand its essentials. And a well-grounded

comprehension of the principles of money is most important for those who are charged with the decision of questions of monetary administration, or who have in any way to participate in or contribute to such decisions, because the currency is so intimately and thoroughly bound up with the economic, and hence with the general, welfare of society. Such an understanding, accordingly, must be of the highest importance to the members of a republican state, in order that they may not become blind followers of the blind, and so consent to measures that would make against their well-being. Especially at this time is a knowledge of the elements of monetary science needful as a defense against the statistics jugglers, who manipulate the accessible collections of figures so as to throw a cloud of statistical dust over the subject. It is easy thus to mislead the uninitiated, especially as there is a prejudice in favor of statistical tables, no matter how gotten up. Figures won't lie of themselves, but they may be made to by misreporting and garbling. It is best, therefore, to be initiated into the doctrine so as to make our own independent and original interpretation of the facts of monetary history. The indoctrination is not to be had by gaping at arrays of tabulated sales and prices; we must first know how to read these, and that faculty is to be acquired only by studying the theory of the matter.

Just as observing the operation of a machine and inspecting its parts and construction cannot yield an essential and competent understanding of it save to one who has a knowledge, intuitive or acquired, of the *theory* of its operation. One can calculate the

working of the device when he knows the principles it works by, the forces it brings into play and how it has them related; then, also, he can tell the effects or modification in its parts or their arrangement, or test the plans of other machines involving the same principles and forces and properties. So when one understands the elements of monetary theory, or knows the forces and relations of things underlying this class of phenomena, he is in a position to check the points in any argumentation, detect twists and gaps in logic, and judge intelligently whether a given financial scheme will work as represented.

Monetary science, then, is a most important branch in the education of a republic; accordingly, it should be taught elementally in the schools. It may well be the lack of such instruction that left many statesmen in such an attitude on the currency question, that, in the midst of their public careers, they changed their minds, having got new light and made fresh study of the subject on the occasion of its recent extensive agitation. Too commonly our statesmen are well acquainted with no science save that of "practical" politics, and, to a varying extent, commercial and criminal jurisprudence.

Two or three specimens of the awry and incompetent thinking that is common with monetary questions may well be given here. One often hears someone of the populace expounding the doctrine to his fellows. Tom and Bill fall into a financial discussion across the breakfast table and over the morning paper. Tom explains that the more money there is in circulation the cheaper it is; presently he is saying, as if it were

a corollary to this, that "in the same ratio everything is cheaper," has a lower price. He gets stuck in making the converse of his first proposition, in translating the price of the medium into common prices, the price of things in the medium. There is a failure of clear thought, traceable to, or dependent on, the poor methods of school instruction, which now too generally seek to avoid mental exertion by the pupil. The first chapter in the economic education of a republic must be supplied in the mathematical class-room. There lies the foundation of sound science and the formation of habits of thought that will make safe guides. One must be familiarized with correlatives and reciprocal relations, as powers and roots, division by a fraction, inverted ratios, etc. It is even good training in the elements of finance to measure a yardstick with a ten-foot pole and *vice versa*. The more strictly logical part—detection of *non-sequiturs*, illicit or insufficient premises, etc.—will come later in studying the economics; it is but a development of open-eyed common sense.

Again, there is confusion of thought and illogical conjunction of distinct spheres of control in connecting the oppressions by usurers and monopolists with the material of the money in which their gains are received, and in seeking to correct such economic abuses by alterations of the currency organization, as if the sins of the money-changers were to be done away by giving them a new money or by giving their property to others. Coinage legislation cannot hinder the manipulation of property and of exchanges, nor prevent men from hoarding their coin or placing it

where they please. A money monopoly, if it exists, may be done away by permitting fresh mintings of the money material and allowing men to buy money with whatever valuable they can produce. This is the logical reduction—a reduction to the absurd—of a great catch-cry of economic sedition and mutiny. That branch of economic legislation, sumptuary or not, which restrains men from pushing the advantages of wealth to an oppression of their fellows is quite distinct from the coinage branch.

Again, the hazy, flickering half-light in which many fancy they see how a coinage relates itself to international trade or to foreign coinages, only illustrates a too prevalent mental habit, a common, but remediable, deficiency of thought and of the disposition to think. Men seem to believe they are expressing not merely a fundamental truth but a solvent principle, adequate and perfect in application to financial problems of larger scope, when they declare for “a dollar that will be worth a dollar the world over,” or for “money equal to the best in the world.”

Now, other countries have no dollar under which ours, if cheapened, would be discounted in trade with them. A letter of credit or a draft to pay a balance would be bought with gold as before. It would cost more dollars, but they would be paid here, and the question whether the purchaser received more in the same proportion for *his* products, or how nearly the same, is the pertinent question, and is mainly a domestic one; in international exchange it is not a question of cutting the metal small or large.

If the reference be to the comparative effect of a cheapening of the currency on foreign and domestic commerce, or to the comparative results in trade with silver-using and gold-using countries from a change of standard—those are questions too complex to be settled with brusque platitudes; exclamations do not explain.

It is idle to think or speak of these things unless we can use the time and exert the attention necessary to reach a tangible issue. Complicated relations and intricate cases must be analyzed before they will be plain, before they can be taken in at a glance or the gist of them touched with a maxim or an apothegm. To brush a question lightly with phrases and leave it is a politician's trick.

Other instances of defective economic thinking, signs of inertness of brain, frequently appear in connection with topics discussed in the following pages, e. g., the subject of pages 229 and 230.

McMaster, the historian, thinks it quite possible to have sound finance under a popular government, notwithstanding the slowness of the people to see what their interests require, which he illustrates by a number of examples of their behavior with reference to their currency. It is not to be expected, nor is it necessary, that a majority of the people shall know the subject as thoroughly as the doctrinaires; yet it should be possible to establish among them, as a permanent qualification for self-government, a general and fundamental understanding sufficient to enable them always to choose well their leaders, and to come to

safe conclusions without taking at each crisis a new term in the ruthless school of experience.

The larger recognition monetary science is receiving, and the wider attention given to its study, may probably inject more of scholarship into politics and help to produce a crop of better equipped statesmen.

There are times when scientists and philosophers, with nothing but sheer understanding to qualify them specially for a part in public affairs, make the best statesmen. Sound monetary theorists may, if enabled to control legislation, save a state from great evils. Thus, in 1695, a little group of strong-minded, clear-thinking men, Newton, Montague and Locke, saved the English coinage from falsification and debasement, and the English nation from the distress that would have followed such action.

The design in the present essay is to make a suggestive outline study, stimulating to genuine thought and presenting in a helpful order the topics embraced in the general subject of money. It is hoped that the work may serve in some degree as a primer and horn-book for a considerable class of inquiring minds, and enable them to test the validity of particular theories and opinions, and to answer the most essential questions they may meet in reading or consulting more elaborate and professional works. While the related fields of mining, assaying, banking, and mercantile speculation are necessarily entered or touched in a comprehensive view of money as variously related on its several sides, the whole theory and practice in those departments is outside the present plan, is of import-

ance only to specialists and professors in those lines, and may be found in the corresponding technical treatises.

Nor can this outline be of any use to those for whom a knowledge of the elements and principles of monetary science is made impossible, or else futile, by the fixed preconceptions and prejudices which possess their minds.

The standpoint taken is that of the people—of all who are concerned with the current medium of exchange. The interest of clearness is made predominant; it is believed that the arrangement and division of the matter will conduce to a clear and comprehensive view; it is sought to make the individual statements as concise as is consistent with perfect clearness. To the same end it is hoped that a few repetitions and some amplitude of expression at certain points may be pardoned. This indulgence will perhaps be granted the more readily to an endeavor to guide those who would make a fresh and original survey of the field. The aim is, further, to give due prominence to the various elements in proportion to their importance in the economic affairs of society, to treat the several topics in a methodical division and sequence, agreeing with the natural relations of the matters discussed, and to bring to the light the vital connections and bearings of the forces and interests involved.

As Lord Bacon says, "Truth is born oftener of error than of confusion." And in general a wiser judgment comes with the open eye that sees clearly the few main elements than with the most exhaustive inspec-

tion of clouds of minute detail and ramification. The latter often misses some main points. If our study of such a subject as this, or of any subject in economics, is to avail us, we must keep close to the ground and never lose sight of basal principles.

As a new and systematic arrangement of history and theory that is old and of argument and discussion which, if not new, is otherwise widely scattered and mixed with much matter not essentially relevant to the present purpose, this essay is submitted to the thought of the public. That there is room for a book on the plan adopted here is scarcely doubtful; how far this effort is calculated to occupy that room is not for the author to judge.

P. A. R.

Washington, D. C., March, 1900.

COIN, CURRENCY AND COMMERCE

PART I

CHAPTERS I-X

**FUNDAMENTAL RELATIONS OF A MONEY AND ITS
VALUE**

CHAPTER I.

RUDIMENTS OF EXCHANGE AND OF MONEY—MONETARY FUNCTIONS.

Money is that form of purchasing power which, by the selection of commerce and the sanction of law, is established as the common medium of exchange and the common measure of value. The terms “purchasing power,” “exchange,” and “value” are, of course, understood in the commercial, or mercantile sense; the last term, though, as we shall find, may sometimes be used in a special sense, and means generally the same as purchasing power.

The above definition is not a complete description: it does not describe all the attributes and incidents of money, and the requisites of a perfect money material; but it defines what money specially is, expressing its essential and peculiar constitution and office.

Money, then, is an institution of commerce. In no society did trade ever get any considerable development without specializing and using some form of value as a money; nor, without money, can a mercantile class, a class making trade its business, arise in the industrial world.

Yet, commerce antedates money, and may dispense with it, as it may with the mercantile class; money is not a necessity, but a convenience, in exchange. Commerce without money, or where any form of property may, in a given case, become the mean for the ex-

change of two other forms and a standard for comparing their values, is *barter*. It is common with children and savages, and occasionally in the most advanced societies. We may discriminate two grades of barter, (1) where each party to the transaction desires what he receives for his own use, (2) where the thing received is desired in order to obtain therewith a third article in another trade. Instances of the former would be the exchange of a deerskin for a bow and of one horse for another, with or without "boot;" of the latter, the swapping horses with the design of selling the one received for something else, as for a third horse or for money, and the exchange of sled for skates in order to buy three books of a boy who has no skates and for the sake thereof will give up the books. It will be noticed that the second grade is a step towards money, and that money itself may indirectly be bartered for; one horse, in the example, serving as a money to mediate between money and the horse first sold. Mercantile transactions, buying to sell, are possible under barter: and the second form of it reduces to the first on the understanding that trade may be the personal use for which a thing is desired.

Barter ceases and money begins to be when the thing to be applied thus in further purchasing is so generally desired that it may be exchanged for any commercial thing that its possessor may want. Should a primitive community have two or more commodities equally qualified in this respect and otherwise, circumstances or chance would select and establish one of them as the common medium; two or more could

share the same field in common, being translatable into each other, as, under barter, all commodities by turns, and in relation to their producers, assume the mediating function; but the exchange medium tends to become one; its homogeneity is required and forced by the interests of industrial society.

To serve as such medium, a commodity must be generally obtainable throughout the community, but need not be of domestic origin; and it must have always a ready market, but its ultimate consumption need not occur at home. We may perhaps uncover to fuller light the roots of the matter by putting some primitive cases. Such an example would be found in a community where wool was largely used, being got from a neighboring settlement by way of barter, and worked into cloth by each family: wool and woolens would constitute their money, mediating between food products, other clothing articles, tools, ornaments, labor, etc. If the society *produced* as well as consumed the wool, and about as generally, producing at the same time the flesh of sheep as food, very likely its money would be constituted of the animal itself, as the live sheep would then be the leading commodity used, or, in the commercial sense, consumed. Aboriginal moneys are of this description—something of universal and *personal* use, whether more or fewer members of the community participate in making or finding it.

The necessary ready market may be secured abroad, by a pioneer settlement in a beaver country, for instance, where the people trade beaver skins at the exporter's for goods which he buys with the skins

elsewhere; or by a rustic community engaged in raising broom-corn, which they similarly exchange at the store of the manufacturer and exporter of brooms. In such cases the middleman most likely has to use a different and foreign money in converting the exports into imports, while the former of these—beaver skins or broom-corn—passed as exchange medium through the society producing them. As soon as a community acquires any foreign trade, its money, though not necessarily as such, is a subject of that trade. In a similar manner (only with the intervention of a third substance as a measure, not as an exchange medium) rural communities use as commercial medium, to a certain extent, eggs and other farm products, which the grocer takes in exchange for goods he brings from a distance, then sells for the medium wherewith he procures those goods; from the farmer's standpoint, his products, to this extent, mediate between his expense in producing and the supplies into which the products are converted at the store.

When a common medium (used generally in all the commercial transactions of society) has been evolved, there is money, according to the primitive definition by Aristotle,* which represents the primary, basal function of money.

By the time the chosen commodity has acquired general use and recognition as the means of facilitating exchanges, the values of the things exchanged through its intermediation are estimated in terms of it,

* "Money is an intermediate commodity designed to facilitate an interchange of two other commodities."

and there are *prices*, i. e., determinations of commercial values in quantity-terms of a substance taken as the standard valuable. Commerce, then, has a standard thing of value, with which all other objects of commercial valuation are compared and by which they are judged. The commercial estimation of personal and other services, or valuables, where wool, e. g., or tobacco, has been hit upon as the common medium through which other valuables are exchanged and into which they have become convertible, is expressed in pounds of wool, or of tobacco, and this rating becomes uniform, customary in the land, and fixed, subject only to occasional variations.

This is the natural and historical evolution of moneys,—through commercial selection a thing is adopted as the common medium of exchange, and then, necessarily, as the common measure of value, in which function it quickly acquires the sanction of custom and thereby of law. The essential particulars that it is itself of intrinsic value, or that it has the property it measures and by virtue of which things are mutually exchangeable, with or without an intermediary, and that it is adopted in and through their interchange, are true of every form of money that any society has ever employed.

It appears to be matter of doubt, or of dispute, with some thinkers, which of the two functions of money is the prior one. The truth is, while they are concomitant in every transaction, one is primary historically, the other logically after the establishment of money. There is for the first time a motive as well as a necessity for using a substance as a commercial measure

when it has already been settled on as a medium. Men do not measure values save with reference to an exchange or when the things so measured are for sale; therefore, they measure with the medium of exchange. In barter each article is measured by the other. When by the use of a medium an exchange is effected through two subordinate exchanges, there are two measurings: each article in turn is measured by a third one, and for the reason that this last is the chosen intermediary. The medium exists to avoid barter; that it shall *measure* is incidental to this service. While, therefore, as in barter, there is a mutual measuring of two values against each other precedent to each exchange, there is no common *pricing* of things in the measure of a commodity without the prior certainty that if exchanged they will be exchanged through that commodity as a medium. Aristotle, of course, recognized the money-substance as a measure, a measuring valuable; and he saw, what many now fail to see, that this measure must be "some one thing," must have unity and uniformity throughout a state and its various industrial traffic. He defines property as "anything that can be measured by money;" but this does not give his conception of money, which, naturally, he had previously defined.*

* Aristotle's definition of property, however, reminds of the third use of money, derived from the second as that is from the first, the function, namely, of *representing* commercial value, whereby, in common parlance, *property*, *wealth* and *money* are often synonymous. Money, then, exchanges, measures, symbolizes, property.

When commerce changes the standard form of value, adopting a different commodity as money, the new medium does not, of course, retreat to a position near the barter stage, but is at once invested with all the attributes of its predecessor, whose office it is to fill more perfectly.

Commercial custom alone *monetizes* commodities, makes them to be money: when a government sets about establishing a coinage, or monetary system, it does not search the catalogue of eligible substances and select therefrom, but it takes the money material or materials as given, taking it as of course and of necessity that the money is to consist of the commodities already in use as such. And in enacting any monetary legislation, even in *demonetizing* a substance, depriving it of the monetary functions (so far as law may do this, in reforming the monetary relations of things) the legislature can deal with none but the substances particularly elected beforehand by the mercantile world. Commerce and its institutions antedate and direct legislation.

CHAPTER II.

NATURAL HISTORY OF MONEY MATERIAL—QUALIFICATIONS THEREFOR—CURRENT MEDIUM.

The representative and standard of property and value has been supplied, in various circumstances, by all three realms of physical nature. Its desirability may depend on utility in the grosser or the æsthetic concerns of individual and social life. The money materials of the most savage and of the most refined societies get their value chiefly as trinket and ornamental ware, though the progress of science and the arts has found many new uses for the money metals, including not a few in which the materially useful and the purely ornamental are combined. Barbarous peoples also use such perishable goods as cloth and cattle: the latter was the standard valuable of the primitive Aryans, or at least in the prehistoric states of the most important European branches of the family. Our word “pecuniary” is an evidence of the fact, as its etymology takes us back to a time when its original, *pecus*, had as wide an application, representing property in general.

It was an early and important step in the evolution of the money commodity to discard the domestic animals for more handy and durable matter. *Durability* is one of the first requisites for money, the next, indeed, after that of inherent value. Besides other obvious advantages which it gives, there is a striking difference between the effects of monetizing or de-

monetizing perishable and durable matter, as will appear (Chapter IV). This and other desirable qualities the money material acquired in becoming *metallic*: thenceforward it is a contest between the metals. After durability the other requisite physical properties are four, as follows: (2) *portability*; (3) *divisibility without loss*, i. e., without any minutest portion losing its proportionate value; to this end a substance must admit of perfect reunion after division. These two qualities are necessary for the corporeal circulation of money, and to make it thoroughly tractable, so as to mediate small exchanges. (4) *Uniformity*, whereby each piece is the same in all substantial qualities (texture, color, etc.) with every other piece of the same coinage. The money material, then, should be perfectly homogeneous, or divisible without producing any dissimilarity of substance in the separated portions. This fourth qualification is essential to a thoroughly reliable money. (5) *Impressibility*, whereby the legend, authenticating and rating the piece as money, may be delineated sharply in the very substance, and partake of its durability. (6) An æsthetic qualification, less important than the foregoing as a physical property, is *attractive appearance*, or beauty, which is given to metals in fine texture, and brilliant lustre and color.

The metals best qualified in these particulars, gold, silver and copper, early occupied the domain of money under civilization, or when men began to explore the earth for its mineral treasures. Naturally, the populations of a country employ, at least in the beginning, that one of the more eligible metals that the country yields most abundantly, or which is found most acces-

sible from abroad, if the native supply of any of them is too meagre. This would be the more inevitable the more a state was isolated. From this cause we find even some of the coarser metals in primitive monetary service: thus iron was used at first in ancient Sparta and Byzantium, and, until the most modern period, platinum was money in Russia, where it was chiefly produced.

Some metals, otherwise eligible, are debarred by their rarity: so aluminum, which was first extracted too late to compete in this service, was, besides, for many years obtained with such difficulty and expense that it remained commercially too rare for money. In view of the way property is monetized, a commodity, to be eligible for such use, must already be a not uncommon commercial factor. Most of the common "useful" metals are excluded from the money list by their deficiency in one or more of the six physical qualifications, as will be seen on applying those requirements as tests. They rust, tarnish, do not resist abrasion or fracture, cannot be suitably marked save roughly by casting in molds, etc. In the first and fifth particulars gold and silver must be reinforced with alloy, while copper and nickel must be mixed, or somehow softened.

Related, through their various adaptabilities, to the mind and estimation of man, metals have *value*; incidental to which essential quality there are two other extra-physical requisites to a good money material, involving the ratio of the magnitude of value to the bulk or weight in which it resides (which ratio we may term *specific value*), and the character as to

permanence of this ratio: i. e., the money material should (7) contain *much* value in *little* matter, and (8) have a *steady* value. The substance must not be *cheap* in the price or estimation of other valuables. Aluminum, perhaps, is now disqualified for large use as money on this account, not having qualities that make it *precious*, however easily it may be obtained. This qualification of high specific value includes the mechanical one of portability (No. 2), and is of importance in relation to trade between distant places, as we shall see. Silver and gold are here as clearly superior to all the other common metals as they are to most of them in the sixth qualification; while gold is in this respect more highly qualified than silver for the great mass of commercial business. We may now discriminate between the two leading money metals; for gold takes pre-eminence both for material compactness and chronological steadiness of value. Physically, even, these two substances are in monetary gradation: gold is the less destructible, as our chemists show that it is much less readily soluble, while silver will tarnish and participate in forming other substances, in associations where gold is not changed. In point of physical permanence; indeed, silver ranks below nickel and platinum. In permanence of value, also, the rank next to gold may belong to one of these metals or to copper rather than to silver, which, however, is on the whole more desirable than they for money. Steadiness of money value, and the comparative merits of gold and silver in respect thereof, are important points in connection with the business relations of the people and with the governmental regulation of the coinage posi-

tions of the two commodities,—in which connections they will be treated.

While no commodity is perfectly stable, absolutely uniform, in value, and though we may not assert that every change of the standard commodity has been towards greater stability, there is a remarkable general tendency, not yet fully worked out everywhere, towards a more valuable monetary substance. This tendency, if not attributable to a conscious search for stability, has, at least in modern times, worked to that result. It is doubtless due more directly to the greater convenience and portability of considerable sums in the more valuable medium, and to the function, or character, of money as the type and representative of value: it seems natural that that which is not only the standard, or measure, of value, but also stands *for* value,—stands forth as the symbol and representative of purchasing power, or wealth,—should be that commodity, otherwise available, which possesses that power and quality in the highest degree.

CHAPTER III.

RELATION OF THE STATE TO MONEY — MINTING — STANDARD SUBSTANCE AND UNIT — COINAGE SYS- TEM — MONEY OF ACCOUNT.

With the most primitive moneys, metallic or other, the terms of each transaction must, at first, have been determined independently of all others, the parties agreeing to the amount of the purchasing medium upon sight and inspection of the same, measuring or parceling it out in some rude method, inexactly in many cases, and according to the convenience of the moment, thus making a price *de novo*, and estimating the quantity and quality of the purchasing value in the same original manner as the value purchased. This, but for the medium, was barter; it was before the medium had come to measure nicely and uniformly. Afterwards, the merchants, who made the medium a *currency*, or current money, would provide pieces of uniform quantity, giving such fixed quantity a name, or *denomination*; these pieces would then pass current either by weight or by *tale* (number); though, in fixing a metallic price by the latter reckoning, the weight of each piece would, in the first instance, be a basic datum. Prices could be made in these pieces without giving them a particular name; e. g., we read of things being bought for so many “*pieces* of silver.”

Still everyone must, without assistance, look to the worth of his money, to the customary or standard qual-

ity and quantity of the pieces paid him, until government fixed such standard value as a binding article of custom, fraudulent infringements of which are like fraudulent dealings in barter, occasions for the intervention of courts of justice. The first and most essential function of the state in relation to money, viz: to punish counterfeiting, is derived from its general cognizance of the criminal and inequitable acts of its citizens.

But this punitive authority must have power to guard against the offenses it punishes, and to provide for their detection: to these ends it must be allowed to put upon the money pieces a design including secret and intricate details. In the line of this service is that rendered through the signature, or "image and superscription," which makes money recognizable by the people, certifying the pieces as money and attesting their full value according to the standard of the name they bear, and so avoiding the need of weighing them in each transfer. This lettering, etc., can be certain and uniform only when performed by some one agency for the entire community; since it is done on behalf of every individual, whether as utterer or receiver of money, and as the service is bound up with the jurisdiction of controversies involving money accounts and amounts, it is a function of government. This authentication, and the preparing the surface bearing its tokens, presupposes the same agency dividing the constituent substance into equal portions of proper quantity, and securing its uniform quality. The *minting* business, then, naturally falls into the hands, or at least under the control, of the state.

Having a money material, or standard commodity, a definite quantity of it must be set up as a measure wherewith to reckon abstract value and to name prices. This quantity of the substance is the *monetary unit*, or *standard unit of value*. The measurement of value is peculiar in this, that it requires a standard commodity and then a standard quantity thereof, defined or measured with reference to bulk or gravity (weight). In metallic measurement commerce, as constrained by the nature of things, fixed at once on the latter mode, by weight. Value estimation or measurement, then, involves all the elements of weighing (measuring gravity) added and applied to the distinguishing element of a standard substance.

The above definition of the monetary unit is in merely physical terms, and looks simply to the physical aspect of the matter. The standard unit of value is, in reality and in exact terms, *the value of a definite quantity of the standard natural substance*. Value alone can measure value, just as physical properties can be measured only with themselves, as heat or distance are estimated only in units of heat-force or length. Since the value used to measure with must be that residing in some commodity, and as there is no commodity whose value is certainly invariable, the measurement of value has this further peculiarity, that it must be done with a *variable unit or measuring portion*.

First the quality of standard metal has to be determined: it is made "standard" * when alloyed to the required *fineness*, i. e., admixed with a certain propor-

* The English commonly use the word "sterling" in this sense.

tion, by weight, of alloy to pure metal. Different monetary communities and unions may use money metal in different degrees of fineness: thus the British standard is higher than the American, as it contains $\frac{1}{2}$ of fine gold, while the latter is $\frac{9}{10}$ fine.

Of the standard metal a definite amount in grains is the standard minting unit, and, being minted, passes as the standard unit of value: but it is observable that the real unit of value is the pure metal such piece contains, irrespective of the alloy. The unit is prescribed as so much fine metal; and it is ordered to be minted at such a standard of fineness, mixed with so much alloy. So with any larger or smaller pieces that may be minted: they are mixed in the standard proportion and their value is that of their fine metal.

It is unnecessary that all the pieces should be of the standard metal. Some of them (the larger or smaller denominations, according as the standard money metal ranks lower or higher in specific value) will be formed of suitable quantities of other money metals. With these the above rule, as to the values of minted pieces, applies only to their *intrinsic* values, since, in their monetary character, they *represent* a certain weight of the standard money metal, unalloyed.

Nor is it necessary that the pieces minted of the standard metal include one piece which contains the money unit: that that metal should circulate in unit denomination. Strictly, indeed, it is unessential that *any* of the circulation should be out of the standard substance: if none of it is, the money of circulation is wholly representative (though in part it will be so only in *legal* theory), every piece being referable to a unit of

unminted standard. By an unminted unit-standard every piece is measured, even where the standard money circulates, if, as in the United States, it is wanting in unit denomination.

All the pieces minted have definite numerical relations with the standard unit, containing or representing multiples or sub-multiples of it. Some of these are *units*, having particular names, and are related to one another and to the standard unit by integral factors. In the monetary systems organized in modern times there is a constant factor (10) for this scale. They are therefore decimal systems. The remaining pieces are mostly halves, quarters and doubles of the various units.

Whether the various pieces circulate independently or representatively, their designations, consisting, severally, of the proper unit name and numerical prefix, are the monetary denominations.

In determining how great the standard unit shall be, and what monetary substances shall be adopted to hold or stand for its parts and multiples in the different denominations, government again consults commercial usage and convenience.

The minted pieces are *coins*, and the business of preparing them for circulation, including the regulation of the conditions and amounts of mintage in the several grades, as well as the various processes of the assay and the mint, is *coinage*. This business devolves on the state functionaries before mentioned,—in the language of theory, on the coinage committee of the people, viz: the general legislature and the officers of the mint. The United States Constitution recognizes it as

a function of sovereign government in giving the National Congress power "to coin money," and recognizes its real nature in coupling that power with the power "to fix the standard of weights and measures."

The system of the coins, the series of minted values, with the rules by which they are compounded in minting, inter-related in exchange and graded in monetary function, is *a coinage, or a coinage system.*

Upon the coinage system is based the *currency*, which consists of (*a*) coins either containing or representing the money unit or some convenient multiple or part thereof, (*b*) paper pieces similarly representative. However dependent, therefore, particular current pieces may be on values extraneous to their own substance, they bear the denominations of the coinage system, and are all conformable members of one *monetary system* with the independent coins.

And though the standard unit be not coined, it is nevertheless the base of the *money of account*; its name and the other unit names, related and interconvertible by the factor of the scale on which the coinage is framed, constitute the monetary table of denominative numbers. These names are things directly dealt with in business accounts; are the elements of bookkeeping, the significant symbols with which that science is concerned.

CHAPTER IV.

ECONOMIC RELATIONS OF MONEY—A CARRIER OF VALUE—SOURCE OF ITS VALUE—BALANCE OF TRADE—EFFECT OF MONETIZING A COMMODITY.

From the incidental property of money as the representative and symbol of wealth, and from the accident that a particular agency coins it and is sometimes said, and even empowered, to "regulate its value," there springs a misconception of the place of money in the economic system and of its relations to individual and national prosperity. The value of money, the money value of coin, is conceived to be called into being by the process of coinage: it is thought, or rather imagined, to settle upon, not to reside in, the coin. To the original value of the raw metal a new kind of value is believed to be added by the creation and stamp of the coining authority. In the commoner and crasser form of the misunderstanding, the idea would be translated better by saying that the new value, created through coinage, displaces the original and ordinary value.

This special "money" value, factitious and extrinsic, or intrinsic to the stamp rather than to the substance, is made a species by itself, separate and extraordinary in nature and incidents. It is true a piece of money may be given extra *force* in relation to debts, but that is not value nor a purely monetary feature. And (what is more pertinent here) the purchasing power

of gold and silver coin is readier and steadier than of some other things; but this distinction was characteristic of their material before coinage, and its prior possession by those substances was a reason for their selection as money. The statement, "there is an unlimited demand for money" is true only when "money" is used in the derived and generalized sense of "property" or "wealth;" it cannot be true in its regular and commonly accepted meaning, that *money* by distinction, in the strict form of coin and its representatives, is desired in unlimited quantities. It is not true for the nation;* it is not true of individuals, except misers, those who secrete cash in strong boxes, and these make small demand for money, i. e., do not offer much goods for sale.

Every form of property, money included, is worth just what it will fetch in some or any other form, and this is the measure of its desirability. The cash in all the bank vaults of your city is no more desirable than a house on Fifth Avenue, a coal mine, or a railroad, each of these being its equivalent in value. Indeed, most men would prefer the purchasing power in one of the three latter forms, its possession and revenue being thus more secure: and if one were presented with so much money, he would probably convert the most of it into other forms as soon as convenient.

If it be said that money is desired in limitless quantities merely as a means of obtaining things, it is to be answered in the first place that money is no more use-

* The topic, quantity of money needed in a country, will be found in Chapter VII.

ful here than other marketable property: moreover, a little reflection should dissipate the fallacious idea that money, the instrument of exchange, really obtains things. In strictness, money is the means of getting things, satisfying wants, in the hands of no other persons than those who dig and scrape the money metal from the earth. All others obtain their goods through other services, through selling other valuables: it is accidental, though convenient, that they sell indirectly, through a medium, or in two successive transactions.

If it be said that money is desired specially for loaning at interest,—property pays interest in other forms as well, and it is only because of this fact that money can be loaned on interest at all.

The production of money, then, the business of extracting it from earth, is one of the several ways in which by labor, always by some manner of exertion, men procure satisfaction of their material wants. The man who rides to mint with his saddle-bags full of gold is prepared to get himself served in various ways and at the same time do the community a service: by spending this purchasing power he enables others to make more sales and so promotes the general prosperity. Always when money comes to the community in this way, as purchasing power, as an addition to the common stock of valuables, a general benefit results, yet only so far as an increased consumption of other products is induced thereby; nor is the benefit less or different if the gold makes its purchases through proceeds at the goldsmith's instead of at the mint, for where the expense of coinage is not defrayed out of the bullion brought, and so more coin is returned to the

owner than his metal is worth, that expense is paid out of the common treasury, thus offsetting to the community the extra value received in the coin. And sometimes the goldsmith's is the better market.

Now, in this relation, the production of money does not differ from or surpass that of other commodities: value for value they have equal purchasing power, and, finding a market, equally enlarge the markets of other products. And, like value produced in other forms, the purchasing power that comes into the community in the form of money represents an expense of precedent values as well as labor, risks, etc. Somebody earned it, got it by skill, shrewdness, daring, application, etc., and so it is with all property. Money value does not differ in origin and nature from that it exchanges and measures; it cannot be made from nothing nor imparted by any kind of stamp: it cannot be made a free gift to a community nor to an individual without diminishing the property of others.

As the advantage, to the state or individual, of possessing a carload of wheat depends on the price of wheat, so the advantage of a pound of gold depends on the price of gold: each is to be gauged by the quantity of other goods it will obtain, just as in barter. The relations of values are not changed by the institution of money. Yet it appears to be a presupposition of some far-reaching monetary conclusions (or assertions) that the possession or marketing of a pound of gold or silver offers the same increase of wealth and prosperity, no matter how much those metals may have cheapened in the purchase of other commodities, and that swelling the currency with any form of money,

regardless of its purchasing power, cannot fail to be a national benefit.

Related to the half-superstitious notion of a peculiar, stamp-derived value of money in domestic trade, is the fallacy that a nation's wealth and prosperity are measurable by the quantity of money-metal that it holds ready for market, and by the preponderance of debit or credit cash balances in foreign trade. The importance of money as the reservoir of value, in which it is stored for future use, is often exaggerated. It is unduly emphasized as the carrier in which value is best insured and the form promising the surest reproduction. Hence, when a nation includes money in its exports for the year, the *balance of trade* is said to be against it: i. e., when, on comparing the sales and purchases of other commodities, the latter are in excess and a shipment of money is made to balance. While this opinion of money and the balance may in general prove correct, does not the proper interpretation of this balance, as favorable, adverse, or neutral, turn upon the particular circumstances in each case? upon the prior condition and prospective plans of domestic industry? upon the country's status as a producer of money metal and upon the relations of foreign productions to the development and ongoing of its internal commerce? An individual may in a given year spend more money than he receives, and yet a closing inventory show a net gain in his present property, the basis of future revenue. A nation may have a surplus of gold in its vaults, as it may of wheat in its granaries, and advantageously lay out a part of it abroad in exchange for supplies needed to bridge the passage or

lay the foundation to next year's profitable operations. Thus the values may be embodied even more resourcefully than if they were held in money. The United States' incurring the payment of gold balances to Europe on account of the new railroads does not imply a real loss, unless the railroads fail of net earnings.

The production of money—gold and silver—in some countries is extensive enough to make the foreign purchases mostly with money, and then leave a surplus for storage of profits. Thus it is with South African gold and Mexican silver. Under normal conditions, or when neither party makes a sacrifice to meet a calamity or waste already incurred, trade is *mutually profitable*, whether conducted wholly as barter or in part with money. The selection of a commodity as an intermediary and standard does not alter the utility of the purchasing power stored in it. An exportation of money metal means a national loss only when it is paid for goods that, normally, should come from native production: this happens only as a result of misfortune or mismanagement at home. Nor is the comparative disadvantage smaller or different if the nation's money is bought abroad with other commodities when there are native sources from which enterprise and skill might obtain money metal.

In view of the basic principle of exchanges, that products are marketed at a profit to each party, the question of loss or gain by exportation of money is seen to be related to the matter of money *exchange*, and we see that when this is in our favor, or when money is more abundant at home than abroad, so that prices are lower there than here, the consequent drain

of surplus cash to the dearer money market cannot be said to entail a national injury. The export of gold, then, pays an adverse balance only so far as it means an immediate consumption of value that should have been kept in store, i. e., an immediate consumption of profits or earnings, or so far as the gold should have been exchanged for native products that were not produced or else remained unsold and unsalable. Of such calamitous traffic balances wars and famines may be the inducing causes.

Where the outflow is excessive, carrying off not only the money held in reserve, but also a part of that in active circulation, a contraction of domestic commerce is induced, which causes further losses to individuals.

But while their monetization has not changed the nature and relationships of the gold and silver values, it has enhanced those values. The purchasing power of a monetized commodity is at any moment, or in presence of a given supply, greater than it would otherwise be, since the additional use enlarges the demand. Here, again, is nothing but conformity to general economic law: and the value of a monetized substance is still wholly commercial, existing by virtue and in the ratio of the total demand for the substance, and in exact proportion to its maximum exchangeability, i. e., according to the definite minimum quantity of it requisite to obtain certain definite quantities of other commodities.

The effect on value of monetization or the reverse is not the same for all commodities. It is greater the

more perishable the thing is: thus the enhancement of value given a less durable commodity by using a portion of it as money cannot accrue to hardened gold or silver from like cause, for while a monetary supply of the former would quickly wear out and require frequent replacement, thus causing a rapid consumption of the substance, metallic coins wear 20, 30, or 50 years, and when the stamp has disappeared through abrasion most of the substance remains. Wherefore, metallic moneys only receive *increments* through the expansion of commerce, and so call for much less metal than if they had to be *renewed* completely and frequently. Even in a state whose commerce is developing and increasing rapidly, the unlimited coinage of any but a *rare* metal will keep the channels of exchange filled with medium, and is liable to outstrip that rate and inflate the volume of currency to a rise of prices. It may be observed that no substance, not even the most perishable, will advance in specific value because of being monetized, if the expense of producing it should be reduced in proportion to the increment of consumption due to its use as money.

This peculiarity of the monetary, and of most of the commercial, consumption of gold and silver in not destroying irrecoverably their substance, will be found important in monetary science.

Another point, noteworthy here touching money metals, is that monetization and its opposite affect the value of the substance monetized in proportion to the fraction of the visible stock of it needed to carry on a given volume of commerce. Suppose gold and silver stand at the value ratio of 20:1, and that it would take

three-fourths the output of gold to supply the needed increase to the world's moneys, while twenty times that quantity of silver would be five-sixths the corresponding output of white metal, then would it advance silver more to make the addition in silver than it would advance gold to make it in gold.

CHAPTER V.

MONEY MARKET—PRICE OF THE CURRENCY—VALUE OF THE MONEY UNIT IN TRADE—APPRECIATION AND DEPRECIATION—PECULIARITIES IN DEMAND AND SUPPLY OF MONEY.

Monetization, or any other circumstance affecting value, influences uniformly the entire mass of the money metal: the rise or fall is not confined to the coined portion. An ounce of gold has its one purchasing power, determined by the law of supply and demand, in whatever form it may be found, saving only the differences caused by the expense of impressing particular forms, as coins, chased and graven ware, etc.

In the present chapter, however, we are to treat the coined portion, money, distinctly from the remaining body of extant metal, as a separate article, or factor, of commerce, with its own peculiar market and value determinants. Afterwards the connection of this value to that of the *bullion* is to be shown.

As general prices, stating the values of things in the nomenclature of the coinage system, express the correlative purchasing powers of every other form of value with money, and of money with every other form of value, so the price of money might be named in some selected valuable, which would thus become the measure of the common measure, a measure a step remoter, and perhaps more nearly ultimate, than

money. Commercial convention, however, has adopted a more general and representative method for expressing the value of money, putting this expression on a base as wide and solid as may be, and making it express a correlation as even as possible between money and the great mass of commodities. This method places in antithesis to money the few commercial staples of the greatest importance, and from an average of their money prices deduces a symbol for the price of money, by letting the number 100 represent that average as it stood in a certain year, and with that standard deriving numerical symbols (as, 98, 101, etc.) for the corresponding averages in other years. These symbols set forth the varying general level of the purchasing power of money.*

When the price of a thing advances it is said to *appreciate*, while money *depreciates* with reference to that thing, and *vice versa* when a price is lowered. And of course the comparative value of the article in question varies towards every other valuable as it does towards money. Now when money appreciates or depreciates generally, and the symbol just alluded to varies accordingly, either of these words denotes a change in the prices of all valuables, except so far as some few may be exempted from the operation of the force inducing the variation; but not in the values of things as compared with one another,—though in these latter relations particular variations, from different causes, may occur at the same time. The price of

* This system may be found explained and illustrated in a paragraph of the article "Bimetallism" in Chambers' Encyclopedia.

money and general prices being in antithetical correlation, a rise of the former is a fall of the latter, and *vice versa*.

We shall the better and more readily comprehend the peculiarity of the money price and market by attending to the relationship of money as the medium for the conversion of values. Its price depends on the demand for it and the supply of it in market, conformably to the same law with the things priced and exchanged by its measure. These products are to be exchanged, i. e., they make demands for one another as they would in barter: the difference is, they make a call for money in the first place and store up their value in it briefly as an intermediate stage, whereby the demands of all products for one another constitute the demand for money. Correspondingly the supply of the latter is the sums offered for goods, representing the demands of other goods, previously converted into the money. Not only the demand *for* money, but also the demand (or supply) *of* money, in the market, really represent the mutual demand and market of products for one another.

The demand for money, then, is the quantity and value of goods on the market, and its supply (so far as determining its price is the question) is the amount of it in actual circulation, or, more accurately, the actual circulation of it. Here we must pause to see what the actual circulation, or market supply, of money is.

It comprises two factors, (1) the quantity, and (2) the efficiency, of money in circulation. As will appear later, the *current* money of a people is necessarily

homogeneous, resting on one and the same base: if the coinage is not fundamentally homogeneous, not all the coin will be of the currency. Nor does the actual circulation comprise all the extant currency: some part of this in any district is out of circulation, viz: whatever money takes no part in moving crops or transmitting to consumption any of the yearly or half-yearly outputs of productive industry and mercantile enterprise. Of the money that does circulate, the demand for goods is greater the more rapidly it circulates: the rapidity of circulation is the efficiency of money. This is promoted by the use of bank cheques, clearing-house balances, and other such devices of the monetary middle-men, which form a mercantile enlargement of the volume of currency, and, representing monies actually owned, enable them, while passing in other transactions, to double their services by backing these credits.

But we have not quite done with the first factor of monetary circulation. The quantity of medium also is reinforced by the use of property credits, which relieve coin and its general representatives of a portion of their tasks, and constitute a commercial substitute for money, of particular and limited circulation. These credits mediate sometimes with and sometimes without a physical token, as personal or corporation *notes* (white paper). In general, they are more restricted locally than the money-credits above mentioned, and they do not represent actual money: their base is property, or, more directly and universally, the *belief* in property back of them, *commercial faith*. Like property, such credit is measured in terms of the

reigning coinage, and credits, in their sphere, form a homogeneous supplement to the currency. Through them a part of the demand for goods is made, and credit becomes a factor of the price of money. To this part also of the circulation the coefficient of efficiency is to be applied, as the extent to which credit mediates exchanges, or the rapidity and extent of the negotiation of its paper tokens, since partly on this depends the volume of credit business.

The whole monetary circulation, or supply, may be summed up in a formula, thus: $v. m. \times r. + v. cr.$, where $v. m.$ is volume of money, $r.$ the rapidity of its circulation, and $v. cr.$ the volume of credit transactions. And as the price of an article is in the inverse ratio of its supply and the direct ratio of the demand for it (or, mathematically, $p = \frac{d}{s}$), the formula for the price of money will be, $\frac{\text{market supply of goods}}{v. m. \times r. + v. cr.}$: i. e. (to express

it in a formal sentence), the price of money is directly proportional to amount of valuables in market (the demand for money), and inversely as the total monetary circulation (the supply of purchasing power in monetary form).

It may not need saying, though certainly those who study the history of prices need to bear in mind, that a sensible variation in *any* one of the price factors will vary the price accordingly unless or until a compensating change is effected in that or another factor. Thus, if the volume of money in actual circulation suffers a great and sudden contraction, the other elements not varying, general prices fall and money is higher.

By reflecting that the old prices, formed under competition, gave only a fair profit to producers, we understand how this effect is compensated automatically by a lessened production of merchandise which cuts down the numerator of the above ratio, unless this change is forestalled by a compensation in the denominator, an increase, for the money remaining in circulation, of the coefficient *rapidity*, and an addition to the volume of credit business. But we shall see how a monetary contraction is soon remedied in the volume of money itself, variation in which, and by consequence in the price, has an automatic check.

Likewise, when commerce expands and the price of money advances on account of an increased supply of products in market, the same automatic regulation and restoration through volume of money ensues.

The fundamental conditions of production remaining unchanged, there is, under freedom, a persistence of the price of money, the level of general prices being subject to only brief and slight disturbances. Where an unnatural money, or abnormal conditions of money production, are foisted upon commerce, the statement will not hold. But the fundamental conditions of producing merchandise gradually change and improve. When goods are produced more cheaply, they will be more abundant, but even the same output will make a stronger demand for money, since each piece, costing less, will, unless the output is restricted or monopolized, offer for less money, which is just how an increased supply works to cheapen goods and raise the value of money against them. Now an enhancement

of the worth of money from this cause alone (lessened cost of that which buys it) is apt to be permanent.

In considering the price of money, final reference is had to definite quantities of the fine metal. Denominations disappear as criteria, save as they answer to an unvarying quantity of the money substance. In comparing prices in different countries, therefore, or in the same country under different coinage conditions, we must reckon by mere weight or translate the units into each other. If the weight of metal in the unit is reduced, the factor *volume of money* in our formula is cut down, unless the number of pieces be correspondingly increased: in the former case the effect of the change would be to advance the price of money, though nominally it would remain as before; in the latter, it would really not be changed, though nominally reduced.

CHAPTER VI.

DELIMITATION OF THE VALUE OF MONEY—COST OF PRODUCING MONEY AND OF OBTAINING IT IN TRADE.

We have seen what the market value of money is: our next inquiry should be, What *determines*, or limits, this purchasing power? Here again the conformity of money to the principles that govern all valuables is apparent. The rule just adduced for other products applies equally here,—The value of money is determined by the cost of producing it. And as in general, so in this special instance, the rule is perfectly applicable only under commercial freedom, when production, distribution and consumption are unforced and unconstrained.

Of the product *money*, the metal is the raw material, the coin the form finished for market: and, of course, the cost of its production comprises all the expenses of procuring and working the material (which latter includes all the processes of the mint, even the final stamping), and of guarding it and the finished product.

The value of money, the cost of obtaining it in market, is kept even with the cost of producing it, or at a pretty uniform margin over the latter, by two influences, counterparts of each other: (1) Competition, acting on the principle that men will produce at a certain minimum profit; (2) the correlative of this, that

men will not produce *unless* at such a profit or a greater. As Mr. Mill states it, "The latent cause of the agreement [between the value of money and the cost of producing it] is the variation that would otherwise be induced in the supply." That is, if money was worth much more than it cost, production would be stimulated and the supply increased until its price, or the value of the unit, had been reduced to the limit of competition. Could money become worth less than it cost, production must cease until the ratio of supply to demand had fallen to a point at which production would be competitive.

Cost of production is not the average cost of an output, but the highest cost to any competing producer, i. e., the highest cost of any part of an output that does not transcend the demand at that price. When the ratio of supply passes above that mark, those who produced at that cost must go out of the business, and production, while increased, is confined to those who can produce at a less cost, which now determines the price, and leaves less profit by the piece of the product, under the increased competition of those who buy with it. Small producers whose expense is greater than the ruling cost cannot compete, while small producers with exceptional advantages in point of expense make an extra profit. This highest competitive cost, which keeps price within a near margin to itself, is that of the great bulk of the output, the *general* cost. When the price falls, owing to cheaper production, it is in view of the greater *abundance* ensuing or expected to ensue therefrom.

The propositions in the last two paragraphs are expressive of general economic law, applying to all commodities that have a general market, including the money metals, and separately, the coined money itself. That the original cost of producing precious metal determines its market value, and therefore that of the coins and other articles made of it, save for the added expense of coinage or other particular operations,—is not fully admitted by all writers: some seek to exempt the precious metals from the laws of commerce.* Thus it is argued that “the effects of all changes in the conditions of production of the precious metals are at first, and continue to be for many years, questions of quantity only, with little reference to cost of production.” But are the questions of quantity separable from those of cost of production? The discovery of more abundant supply, of sources from which a given quantity can be obtained more quickly, implies the attainment of less costly production: unless its cost were less, additions to supply could not be greater or more rapid.

A chief influence misleading these thinkers is their neglect of the point that the money material must be in demand for uses besides money, a point made already by Aristotle. This appears from such remarks as the following: “The knowledge that a commodity can be produced at less cost will cause a reduction of its value; this is not true of money.” But how is this effect caused with other commodities? Only by a

* There is, indeed, one way whereby they may be so exempted: but only in application to *debts*. See Chapter XV.

slackening of present demand: it does not wait for the immediate competition of producers, because buyers will wait for the larger supply. Now why will not the news that gold or silver is to be obtained at less cost operate similarly to defer purchases of the products of technical skill containing the metal, and so through temporarily shortened demand hasten the anticipated fall? There are here, as in the other cases, the same ultimate reasons for the expectation to precipitate the thing expected. And if the supply cannot be increased indefinitely, neither does the consumption destroy, but merely appropriates, the metal. As we shall presently see, such an effect on the money metal is speedily translated into the coinage. Again,—“a total stoppage of fresh supplies from the mines would not be felt for some years in the increased value;” * * * Why not, considering that demand is steadily increasing and requires that a certain addition, approximately determinate, should be made to the stock each year in order to prevent that rise in value. * * * “and,” so runs the rest of the sentence I was quoting, “an increased amount of production, though more rapid in its operation, takes some time to produce an effect.” How much time it takes, under modern conditions, may be judged from the course of prices after the discoveries of gold in the middle of this century. The price of gold fell so rapidly, approaching the new cost of production, that abnormal profits soon ceased, save irregularly for rare finds (which may occur at any time under whatever ruling cost), and the profits of the regular mining fell off on a steep sliding scale, even before the cost rose towards its old mark on ac-

count of the sources becoming less prolific. In 1853 (so quick was this cheapening) the silver coins of the United States had to be reduced in weight to keep their intrinsic sufficiently below their nominal value by a gold measure. Still quicker and more definitive has been the fall of silver under the increasingly large and cheaply obtained additions to its stock.*

The monetary effects of the first supplies of money metal obtained from the New World by the Spaniards in the 16th century traveled more slowly. Adam Smith calculates that prices in England were not affected until 1570, and that they had not done rising in consequence of the new money before 1640. But at that period all commercial changes were propagated very slowly, commerce was hampered by custom and by State regulation much more than it is now, communication was slow, intercourse between nations was impeded and restricted. Where prices could be regulated and coinage restricted by the uncommercial *fiat* of a dull mediaeval government increments to monetary supply had less chance to produce their proper effect. Some districts escaped this effect, or felt it late, because of their isolation. Still, as fast and as far as the new American money could penetrate European markets, it elevated prices, until the demand for money, under commercial expansion, began to increase at a rate about proportionable to that at which supply was augmented. This does not appear to be denied.

Nor is it likely to be disputed that the price of money never falls below the point fixed by the highest

* The monetary aspects of this silver depreciation are noticed at more length in Chapter XVI.

competitive cost of production. A rise in the general cost of increasing the supply without a corresponding rise of the market value would imply an alteration in demand that could result from nothing else than a radical revolution in human interests. If, indeed, the supply could be increased much faster at the present regular cost, the value of money must fall, unless the demand were quickened correspondingly. But here, as elsewhere, abundance and cost of a given quantity are correlative and inversely proportional to each other, and value follows cost down to any degree of cheapness, as that of water or air. As a matter of fact, the demand has always proved strong enough to make the important sources profitable—those which have successively yielded the great mass of the world's stock—profitable at their respective costs, and even when worked the most freely; unless, indeed, we may credit recent statements claiming that quite productive silver mines in Germany and the United States are deserted by reason of the extraordinary (and, as some assert, artificial) cheapness of that metal. This, however, is merely a case where the cost of production drops from one point to another, so excluding the competition of some producers and cutting the profits of others: which of them was established by force as the ruling cost will be understood better after considering the subject of the next chapter. It is not made to appear that production has been suspended at the important and prolific mines.

As to the upper limit of the value of money, it is scarcely tenable that it can be raised above the highest competitive cost save by the creation of a monopoly

of gold and silver production, and this monopoly would require a world-wide organization: then, as usual when competition is destroyed, the price would be dictated. The old method of raising the value of money by governmental restriction of production from the mines or through the mints, is no longer feasible, and its object has ceased to be politic. Under freedom, this limit of the highest cost of the gross production can be broken only by the demand coming to increase at a much greater rate, or by the general failure of production, or by a conspiracy of these influences. Thus, indeed, the production of money could be placed beyond the pale of economic law, and, like the rarer gems, gold and silver would command uncommercial prices: and at once they would be unfit for money.— While it is undeniable that government can, in a limited and temporary way, vary the demand for these metals by altering their relations as monetary substances, it is not easy to imagine how an artificial impetus could be given to demand strong enough to produce the effect in question. As a matter of fact, when old sources grow less prolific new ones are discovered and, so far, the rate of production has kept pace with the rising natural demand. When the output and general cost of the metal have long been unaffected by changes in the conditions of production, the tendency of its value is still downward rather than upward, the average profits falling off by insensible degrees. As a fall in cost of production must in a measure check itself through the resulting rise of general prices, which reacts in higher prices for mining labor and supplies, so, correspondingly, when that cost begins to

rise on account of shrinking yields from the active sources, this increase of cost and the consequent fall of prices check themselves by enabling producers to resume or commence profitable work at poorer mines, when what the metal will purchase more than replaces the expense of obtaining it from such sources.

In view of what others have written about cost and quantity, we may not waste time in glancing at a pair of cases, purely hypothetical and, from the standpoint of the history of gold and silver production, well-nigh impossible. There was never a fall in the value of money on account of an increased quantity unaccompanied by a fall in the cost. Suppose (1) the output to be increased at the present cost: if the demand is insufficient to take it all at that price, money may fall locally and temporarily, at a loss to producers, but the next year's or month's output will be smaller. Again, regardless of quantity, a reduction of cost inevitably influences value, and unless offset, varies the same. (2) Let the production remain steady in quantity, while its cost is lowered: money will soon depreciate, unless demand is strengthened enough to turn production to poorer sources, selecting a new cost as value determinant; when, until richer ores and deposits are revealed, the owners of the former more productive mines will gather fruit of rare good luck.

Throughout the preceding paragraphs it is implied that original production of precious metal merely augments a constant supply, thus constantly increasing; over against which a standing and gradually enlarging demand is implied. The increment of demand includes the new demand for use in the arts and that

for use in exchange, and is due to the expansion of commerce and civilization. Have not students of the subject observed that the strengthening of demand has always at once been compensated, and generally anticipated, by fresh sources of supply? Indeed, the new discoveries create a great part of the new demand by their extension of trade and colonization. Marked discrepancies between the increments of supply and demand cause variations in the value of money. Demand, a factor of all valuation, has a latent and variable influence to hold up the highest profitable competitive cost of production, which, accurately expressed, is the highest cost of supply,—of supplying the demand.

Now the purchasing power of an ounce of gold or of silver is nearly uniform amongst all nations that have mutual dealings, and its average is the highest cost at which any portion of the latest output was produced to meet, or profit by, the demand. The whole extant mass of the metal, thus uniformly valued by the ounce, includes all, in whatever form, that has been inherited from the past: all this, some of it perhaps thousands of years old, is estimated according to *present* cost of production. As the price of a crop or of any periodic output of a commodity sinks to a uniform level with any surplus that may appear, so the value of a remainder from previous production, whatever it may have cost originally, is limited to that of the product now first marketed. And so each new accession to the world's supply of money metal reduces the whole surviving body of it to the value determined by cost of supply at the present period. The

amount brought over from previous years and centuries, at the highest value that would be refused for it, represents a section of the demand; at the lowest that would be taken for it, constitutes a portion of the supply. If its possessors should produce to market anew any quantity less than enough sensibly to strengthen the supply, their profit is its worth by the rule of the present cost of supply less what it costs them,—less nothing if they received it as a free legacy.

The purchasing power of money (i. e., of an ounce or pound of money metal) has greatly diminished in the long run through the ages, when we measure it by an unchanging standard, or by a product whose physical conditions vary but little, like the strength and work of muscle. That this purchasing power, measured in general merchandise, has increased instead of decreased in the modern industrial period, is due to the greater absolute cheapening of such commodities,—an enormous reduction in the original elements of their production, the time and hand work involved. It is in this diminution of the time and labor requisite to produce a given quantity of metal, as well by reason of improved and quickened processes as of the greater extent and richness of the modern sources,—that we find the reconciliation of lower purchasing power with diminished cost of production: while an ounce of metal will buy less labor than anciently, the labor necessary to produce it has diminished in still greater measure.

Another point relevant in this connection concerns the mutual relations of gold and silver values: a reference thereto may fitly close our review of this branch

of the matter, though we anticipate here a topic of a later chapter (XIV). The cheapening of silver, or of money in silver-using nations, has had the effect to cheapen gold, and *vice versa*, because many countries formerly had free and independent money of each metal, and lowering the cost of one would make its coin preferable for money, displacing the other from such use and sending it to countries whose money was constituted of it alone, or increasing therewith the supply to the arts. This result from the swollen stream of gold about 1850 was forestalled in the United States by the Congressional Act of 1834, which in effect demonetized silver as independent money: yet, even the small silver coins, overvalued as they were, had their intrinsic worth raised above their representative gold value by the sinking of the latter, and, but for the recoinage of 1853, would have been swept from circulation. In such cases the process is reversed, beginning not at the mines, but in the market, where first the ratio of supply is raised and the cost of a metal lessened through its abandoning one of its uses: this naturally results in lowering the competitive cost of production and the relinquishment of its poorest sources. At the same time, the enlarged use of the displacing metal must check its own fall.

CHAPTER VII.

REGULATION OF THE VALUE OF MONEY—CONTRACTION OF CURRENCY AND OF CIRCULATION—PROPER VOLUME OF MONEY—HOW OBTAINED AND REGULATED.

Now the general average value of an ounce of money metal, an average, it is worth repeating, fixed by present cost over the world's commercial neighborhood, and not as an average of the different costs at all periods in which the total stock has been produced,—this average persistently tends to express itself in the price of the coinage of each nation: the “cost of obtaining money” in the general market tends to conform to the ruling cost of original production. And this tendency works on the same principles governing the supply of increments, to the common stock. Variations of the value of an ounce coined from an ounce uncoined, owing to changes in the ratio of monetary supply to that of the ruling staple commodities, stimulate or retard production to the mints. If the price of money in a country, rising above the general level, increases the margin of profit at the present cost of supply; (1) native sources will be worked more extensively: a higher cost, fully replaced by the worth of the metal when coined, prevails for a time in that country. (2) It becomes profitable to have ornaments and utensils of the metal in question coined up. (3) Production in

other lines for export is stimulated: it pays to sell lower abroad, or to buy foreign coin at a dearer rate in order to have it coined over for the still dearer domestic market: i. e., the worth of money has risen to the cost of producing it thus from foreign coin. If it is a gold-using country, native silver, among other things, may be produced more largely, going abroad to buy gold.

In these ways the ratio of money supply will be restored: in a given case the last two, or even the last one, may suffice, speedily replenishing the coinage, and bringing its value to the general level of that of the metal in the world's markets.

In the opposite case of the worth of money sinking below that level, the processes are reversed: original production slackens, coin and bullion go abroad to buy where the metal affected is dearer, or they are diverted to the melting pots of artisans; since thus more can be recovered on the cost at which such coin or bullion is held. Presently the money plethora, in proportion to the domestic commerce, is remedied sufficiently to re-establish in the coinage its usual approximation to the average purchasing power of the metal.

If the country is commercially new, extensive and productive, and is developing rapidly but without a considerable yield, as yet, of money, its fresh demand for that will doubtless stimulate production throughout the world, raising for a time the world's valuation and the ruling cost of supply. The effect is reversed if the chief product is money, or where the nation is wealthy but commercially stagnant or retrograde.

Thus the supply and value of a nation's money, unless this is non-metallic, are regulated automatically in the economic ongoing of the world: and general prices, so far as determined by supply of exchange medium, seek a constant level. A question that exercises the minds of those who have not mastered the first principles of economics is, how to define the quantity of money needed in a country. The question is rather an academic one, of little practical import, since the industrial world automatically supplies itself with all the medium it has occasion for, yet it deserves our attention by reason of the false ideas that are current in connection with it.

This quantity may be stated as the amount necessary to transact the business of the country. Formerly Locke and others undertook to reduce the matter to certain statistical particulars of this business, thus: taking the year as the basic period of the circulation, they allowed as a sufficient volume of money the sum of all stated annual payments plus the annual sums of the payments recurring at shorter intervals, divided each by the denominator of the fraction that the period is of a year, as, the fifty-second part of the amount paid yearly in weekly wages, the half or quarter of the interest accruing, the twelfth of ground rents, the whole of taxes and other yearly rates. Such a statement might be accurate enough for the conditions obtaining in the seventeenth and eighteenth centuries, and helpful to governments that arbitrarily restricted the money supply. But for present conditions it would be a most inadequate and superficial representation, while for any free or diversified

mercantile state it sheds no clear light over the matter and does not disclose its basic elements.

In these days we hear much of the *per capita* circulation, as if there was a proper amount to each soul of the population. But the sole significance of such a calculation is to show how much value the people may have temporarily lodged in the monetary reservoir: it has no necessary conformity to the amount of their transactions.

We shall look to the core of the matter when we seek the criterion in view of the service of money as the medium of exchange: as a measure of value it is concerned in many transactions, especially between distant places, where it does not assist as a medium. With this view some might say that the right quantity is the amount that will maintain the level of general prices: i. e., there should be enough money to buy all the valuables that may be placed on the market. To this end, however, the money itself must be for sale, and at any time a considerable but indefinite portion of the money issued is withheld from circulation. Moreover, money does not constitute the market for goods, it is but the medium, often merely the measure, by which products make a market for one another. When there is superfluous production in any line, whether of labor or commodities, no amount of money in circulation will assure a market for the surplus, while the demand for goods created by the production of money from the mines is comparatively slight: there is no single great staple product of the United States whose yearly output does not exceed

in value than that of the money metals in that country. There may also be over-production of money as of other commodities: the demand is limited, and if considerably surpassed by supply there is an over-coinage, money falls, and the fresh demand for goods caused by the increment to money supply falls off in proportion to the rise of prices.

The debtor, indeed, desires this rise of prices, as a debtor, or he whose indebtedness exceeds his sales at present rates. And there are writers who support the poor debtor in clamoring for more money and rising prices. Now, debts and credits aside, the effect of the rise of products to be sold is balanced, and, for many people, more than balanced, by the simultaneous rise of products to be bought. In a subsequent chapter I shall undertake to demonstrate that a large preponderance of evil must result from a rapid rise of prices due to a depreciation of money, as well as from a sudden fall owing to its appreciation.

Those who insist that the best supply of money is that which gives the largest amount per head of the population, and that rising prices must be beneficial, are logically committed to the doctrine that the right quantity of money is the greatest denominational amount that can be issued to circulation. Now under automatic regulation of money supply, on the principles adduced at the beginning of this chapter, an over-production thereof, or an increase large and sudden enough to induce a disturbing advance of general prices, can hardly occur with one homogeneous money, constituted of a metal having world-wide

uses.* To escape, therefore, the upper limit of prices the natural regulation must be superseded: to this end government is often solicited, and sometimes persuaded, to issue representative paper, or else dependent coin of a secondary metal, in amounts that would render such currency irredeemable in the basal money, which is thereby superseded and displaced from the currency. This party teach that the production (or, as they consider it, the *creation*) of money should be, not merely without exact limitation, but absolutely without bounds as to either numerical amount or unit value.

No one, probably, will object to the increased coinage of money, provided the coinage be kept homogeneous and that the increment is *absorbed* into the circulation. When the fresh output of wheat is at once bought up at the customary price and no surplus remains on the market, the output is absorbed and wheat is not cheapened. So if a fresh increment to money supply, homogeneous with the existing currency, goes on unceasingly to mediate exchanges, always meeting some product offered for it, there is an expansion of commerce which absorbs the new money and prevents it from affecting prices; this expansion, being an increase of products to be exchanged for one another, is a new increment to demand for commercial medium. Or if, because of a disproportionate production of money, men have been compelled to do without ready

* It is believed that there can be found no record or trace of a deranging or harmful rise of prices due simply to lower cost of producing money metal.

money, i. e., to have inconvenient recourse to barter and credit in their transactions, or to defer or omit purchases, there has been a *contraction of the currency*, which the new money relieves. Only in these two ways can money be absorbed into the circulation instead of remaining on the market to lower prices; and the cases are really one, the sole distinction being in respect of the stage at which the money appears,—in the one case preventing, in the other curing, the contraction.

New money may to some extent replace credit even when this has not been strained and credit business pushed to an undue extreme. This fact that credit methods, at least if over-taxed, offer an inlet for new money, when this makes purchases that would otherwise be made by credit, implies that in such methods commerce finds a reserve purchasing force, an elastic medium to span gaps in the monetary circulation. This positive working of credit to keep up purchases and maintain the real supply of money at an adequate level is quite extensive,—far more so than its negative influence to admit, by intermitting its own offices, new money to the circulation: for the institutions of credit traffic have become as positive and fixed as any commercial institution, and will not suspend any considerable portion of their business in order to give new money employment. It is interesting to notice how barter, not wholly discarded on account of the adoption of a common medium, is revived in connection with modern wholesale traffic between distant places,—goods to go from one city to another being paid for directly and wholly, though perhaps at a later time,

with goods that are to pass in the reverse direction. It is well observed how the amount of credit transactions, in which things are bought and sold by giving and taking credits in exchange, steadily increases with modern improvements, and especially through the multifold barter of credits for one another, as in the clearing houses. The growth of commerce, therefore, goes on with proportionably less dependence on direct mediation with money.

Exchange will not be balked by lack of a medium: if two men wish to trade the fact presupposes that each possesses something, and they will infallibly devise a way to compass the exchange though neither of them has a cent or a farthing in money. The purchasing power, or salableness, of one's goods or labor does not depend on money, or a particular transitional or intermediate form of property: according to their amount in terms of a common measure they are an efficient basis of credit, and so readily purchase other valuables. A man who has not such purchasing power cannot buy, be money ever so plenty: ability to buy may be given to him *gratis*, and most conveniently in the form of money. But who shall make the gift? He must earn the money in some way, as did those who produced it,—fetched it to the mint and had it coined. Markets never fail nor prices fall for lack of mere medium.

Should general purchases fall far below their normal ratio to supply of goods, prices must drop: this may happen as well from general over-production as from failure of consumption; and consumption, be it ever remembered, is not in reality made with money,

but with other products; the producers of money—a small class—are the only consumers who get goods by money. All classes obtain products by means of *their* particular products: a failure of consumption means a failure of production. The absence of buyers in the general market may, in part, be the translation of failure of production from the money mines: but it is only thus, as a general commercial cause, that a shrinkage of the relative volume* of money can contribute to a fall of prices. Yet the failure of buying may as well and in as great measure be due to diminished outputs from another class of mines, as iron, lead or coal, or from some other particular industry, agricultural, manufacturing, etc. And as a matter of fact short crops, a reduction of farmers' purchasing power, much more powerfully (and more frequently) cut the market and price of other goods than a total failure of the year's output of money could depress general prices, if the production of money was to be resumed the next year. In the latter case, the effect of the relatively contracted volume of money would be independent of its use as a medium, which service might not be impaired in the least, as credit, by its elasticity, would come into fuller play and supply the deficiency.

Thus a reduction of the volume of current money in proportion to the volume of business by no means necessarily involves a contraction of the circulation. The latter phenomenon, a financial stringency, is commonly mistaken for a contraction of the currency, and then, under the latter name, is regarded as cause, while it is but effect. It is really a general contraction, or

* The currency contraction alluded to on p. 68.

comparative suspension, of trade and industry, emanating from influential shortages or suspensions in some particular lines, which in turn are due to special first causes, one or more. The symptomatic effect is scarce buyers and falling prices: there is commonly money enough technically "current," but much of it is kept out of the circulation, which thereby is "contracted."

Whatever induces a fall of prices, a second and immediate effect is to quicken production to the mints by one or more ways, as stated in the first paragraph of this chapter. If the direct cause was a *currency* contraction, a prior cause, a step remoter and nearer the real source, is likely to be discernible in an excess of foreign purchases: the money went abroad where it could buy cheaper or get better satisfaction for present wants, and so left the country short for home buying. When prices at home start downward, a new influx of money enlarges the contracted home market: thus the fall is speedily checked and cannot become marked, unless the new money is withheld for a further fall or for the same reason that contracted the circulation. And it would be inconsistent to suppose that this will be done when the trouble is occasioned by a deficit of the monetary purchasing power.

When, therefore, the depression of prices is serious and obstinate, since the increased value and consequently stimulated production of money did not check and remedy the trouble in its first stages, the fact proves that the stringency was not caused by a deficiency of money: it is a disorder of the economic system, and must run its course. Nor, in such cases, does the extra mintage, though, as always, it ceases when

the level of prices is restored, mainly produce that result. For, as in the milder cases when the currency is simply depleted, the value of money is re-established on the basis of original cost of production only by the removal of the cause that induced the disturbance. When this is effected, the old money returns, and the new then for the first time freely flows, to the channels of traffic. Upon business revivals, accordingly, the circulation is apt to overflow and raise prices temporarily above the normal limit: there is a commercial rebound.

It is plain, then, that a serious or a lasting depression of general prices is impossible in a country that has any money of unrestricted coinage; unless the world's sources of money metal utterly fail. In that case the world's coinage systems must be reconstructed with smaller units, or other metals chosen for monetary service.

It is plain, too, if the foregoing course of thinking is sound, that the question of the right quantity of money is inseparable from that of the value of money and the conditions and methods of trade; that the elastic force of credit gives quite a range within which the quantity may be limited; that this adequate quantity, like the actual circulation, is as variable from hour to hour as the face of the sea or of the sky; and that, like the price value of money, it can be expressed only in a general and indeterminate formula. This formula would be:

$$\begin{aligned} \text{The needful, or normal, volume of currency} &= \\ \frac{\text{quantity of goods in market}}{\text{normal value of money}} - \text{volume of credit exchanges} \\ = \frac{}{\text{rapidity of circulation}}. \end{aligned}$$

In this complex fraction the factor, normal value of money, is a commodity factor, viz: the price of the money unit in quantity of the representative commodity or of the representative mixture of commodities. So that the fractional part of the main numerator reduces to a number, the number of dollars or other money units, and consequently the whole formula becomes such a number. The reader will observe that this equation is derived by algebraic transformation from that for value of money, given near the close of Chapter V.

CHAPTER VIII.

COMMERCIAL APPRECIATION OF MONEY—PANICS.

In this chapter it is proposed to explain the serious and sudden lowering of general prices, as illustrated by the most noted instances in American history. The explanation will postulate some principles to be elucidated hereinafter, yet the incidental and latent part they play here does not require that the present topic be deferred and the proper order disarranged. This chapter and the following one can, however, be skipped without missing preparation for the subsequent sections of this study.

In this examination we shut from view the unobtrusive and quickly remedied *currency* appreciations, those price fluctuations due to irregularities in the production or outflow of money, and which index comparatively slight unevennesses in the volume of domestic trade: we confine attention to the heightened valuation of money from commercial causes, from circumstances affecting the price of money on the money side, i. e., acting not on general products but on money and its employment; in such influences finding the forces that induce the great contractions of circulation, or financial stringencies.

This behavior of commerce as to the use of money depends on one or other of two causes, the cheapen-

ing* of money by tampering with the substance of its unit, and the unprofitable investment of money. The latter is unsuccessful speculation, all business being speculative, but with various degrees of security: to affect general trade and prices its operation or contemplation must be on an extensive scale and directly involve a large section of the national industries or of the population. On this principle, much swindling has been perpetrated: on account of visionary hopes built on suggested possibilities or interested representations, shares of companies formed for mining or land improvement, or with vaguer and more complex foundations, command fabulous premiums for a moment: then the meagre and inadequate basis is discovered, the blown bubble bursts, and thousands are left penniless. And on the former principle, through adopting a cheaper or fluctuating value-unit, nations, following blind guides, have often cheated and fined themselves: it has come to pass that even the threat and prospect of such money is sufficient to induce commercial courses that precipitate a large measure of the effect its actual adoption would work.

In the inflation of John Law's gigantic bubble, the scheme organized through his "Company of the Indies," the two principles were united: the money of the French people was made to stand for, or upon,

* Previous explanations, it is hoped, will have prepared for understanding that there can be an appreciation of money and higher prices—i. e., cheaper denominations in the current medium—at the same time; these prices might be still higher if the former money stood at its former valuation.

shares in that rainbow bonanza.* And, indeed, we may say that always a monetary system forms of the nation a joint stock company, in which all are constrained to be shareholders: all participate in a common loss when the share unit, which is here the money unit, is depreciated.

Where the speculation is organized by private companies to be forewarned is to be forearmed: at least the investments, when made, are voluntary and a loss is not anticipated. But when trade and industry will be touched sorely by a proposed measure of government regulation, the avoiding pecuniary reverses depends on the wisdom of the legislature; since the direct effects of the measure, once it is taken, can not be escaped but by abandoning the affected business, which action does not parry the blow, but weakens somewhat its damaging force. Under such application, therefore, either principle may work in two ways, by realization or by anticipation. The effects of (1) new money or (2) of laws changing radically the conditions of investments in respect of competition or other industrial relations, may not be apprehended till they are experienced: or, where the business faculties are sufficiently alive and forethoughtful, it is seen, or felt, that to continue under the conditions to be imposed will really be making investments anew and on an unfavorable basis; wherefore producers seek to forestall the change and at once prepare to suspend or contract their operations.

* See *Perry's Political Economy*, p. 364, ff, and the passages there cited.

Plans involving the unremunerative investment of capital, when their execution begins or is anticipated, produce *panics* co-extensive with the constituency of the institution promoting the scheme: if a single private bank fails there is a panic among the creditors, the influence of which is propagated in widening circles with diminishing force. On the national scale, where government is the promoting institution, we may describe it as a *panic terror* when the calamities burst in an unexpected flood, and a *panic fear* if they are realized and reduced by anticipation.

In either sort the economic progress and effects of these revulsions are in general as follows: The losers, actual or prospective, feel a pecuniary straitening and curtail purchases. The general markets are thus apt to be affected first by slackening demand, especially where producers in one or more important lines are seized with a panic fear lest *their* markets are to be crippled: they discontinue or reduce their outlay in labor and the material elements of their business. Thus one or more great products—cotton, iron, labor, transportation, etc.—are affected directly, the earnings and purchases of the producers—planters, mine owners, skilled workmen, freight companies, etc.—are cut down, and the depression, as lowered demand, travels from market to market. All suspend or restrict production in the same ratio, and share losses proportionably, except as it may be contrived to throw the burden of damages upon labor. An inseparable twin of this process is forced selling, sometimes beginning with efforts of failing concerns to raise money for creditors: but always as stocks of goods find falling markets, they

offer at any figure to make sale. Those who produce such goods to the trade, or their raw material to the factories, find a shrunken demand, and as demand falls off through the markets in close association, their supplies become "long" and cut prices inevitably.

The low selling means a heightened demand for money, as the curtailed buying means a shortened supply—a contraction of the circulation: together they induce a decided appreciation of money. On either side further particulars are noticeable. (1) Purchases for luxury and culture are largely cut off: when they stop buying for the conduct of business men retrench all expenses, buy only necessities and these from hand to mouth: many have suddenly become poor and can buy little, while the rich cling tightly to their cash. As workingmen are thrown out of employment or wages are cut down, labor buys much less: there is more starvation in garrets and new beggary in the streets. (2) Men who were employers or salaried officers enter the ranks of wage-workers at low rates. Plate, jewelry and ancestral furniture are sacrificed, demanding money wherewith to get bread, clothing or shelter.

Nor is the shortened supply of money appreciably built up by the ornaments and other ware of precious metal which is minted up to stave off starvation and houseless nakedness. Though such money is thrown at once on the market, it is quickly secreted, joining the hoards that are withheld till prices shall reach bottom or clearer openings appear for profitable investment.

Under modern conditions these mercantile crises with industrial stagnation and falling prices, develop and spread with extraordinary swiftness. In a few weeks from the first alarm the disorder traverses a continent and is immediately ushered in in all its virulence, to last for months: more than a year may elapse before business fully revives and prices recover a normal level. Meanwhile much capital is idle or seeks foreign investment: at home markets are all confused and uncertain; it is a mystery where prices will finally bring up, or when. A change is wrought in the mercantile psychology: openings that previously would have been embraced with eager confidence are distrusted and rejected.

At length, when the collapse has spent its force, business revives on previous lines, save that the calamitous branch is avoided and some others get a relatively enhanced cultivation: or when the effects of the departure from the established financial system or mercantile policy, unless finally averted, are definitely realized and precisely ascertained, a readjustment to future conditions, monetary and other, sets in: the lines of enterprise are re-formed, with a contraction here, a compensatory enlargement there. First, production in certain lines can be resumed on a calculable basis: seeing a clearer issue men begin to take advantage of the low prices. Purveyors follow producers to the markets, where both get larger stocks. The process of trade depression is reversed. Money, new and old, flows in a fresh, rising tide through all the hives and avenues of production and distribution. The state of mercantile faith also is reversed: sensitive though

elastic, it was quickly and completely prostrated: with money returning and prices rising, it rebounds to sanguine confidence. Here and there in reckoning on the fresh demand for goods, the mark is over-shot: in consequence there is over-buying, and the prices thus affected mount for a season to an untenable height.

The foregoing may serve as an outline sketch of the natural history of those spasmodic contractions of the market supply of money which have mistakenly been attributed to a felt insufficiency of the volume of currency.

We should pause to note their effect on the value of money to loan. This varies according to the principle by which they occur. When a panic results from a fear of the money in which returns will be made, rates of interest are raised. The enhanced risk of losing part of the principle must be compensated. In this case, therefore, the loaning price of money is high at the same time that its exchange price is high,—an abnormal phenomenon. In fact, it is the retention and withdrawal of money from investment by loans, as well as its retention for subsequent sale as a commodity, that, under the apprehension of poorer currency, precipitates the fall of general prices. (If this fear is afterwards realized, the effect, of course, will be to raise prices generally, but not the fixed principal or rate of loans made before.)

Where, however, the panic and crippling of markets springs from the expectation of certain productions losing their market, or from losses incurred through

certain forms of investment, the influence on interest earnings is normal. In most directions, openings for investment are neither presented nor acceptable to the capital set free. Many legitimate branches become foolhardy speculation, shunned by both the practical producer and the silent partner or financial backer. So far, the change in demand to hire money is balanced by that in supply to loan. A few forms of security, however, will still be eligible in the capitalist view: with reference to these the increase in supply is not compensated on the side of demand. However panic-struck, capital will accept such stable security as farm mortgages and government bonds, whether state or municipal. But while government borrowing may be enlarged in consequence of the depression, the openings in the agricultural line will be more or less shrunken; though the agricultural and grazing interests suffer the least from a severe general depression, as being the original and basal industries; wherefore, some of the capital thrown out of its former employment buys land as well as mortgages thereon. Nor will the fact that some productions by a lucky chance balance their share in the common shrinkage with added foreign markets offer an *increase* to business chances and swell the demand for money to hire. On the whole, then, the rate of interest in such case will fall, corresponding to the rise in the exchange price of money.

It will be seen, accordingly, that the effect on the loaning price of money affords a test to decide whether a given panic occurred for fear money would soon be cheapened, or that great losses were being, or about to be, suffered in the mercantile sphere. The com-

parison also shows the greater viciousness of the former cause.

In the United States four notable and instructive commercial crises have been induced within a period of sixty years, viz: the panics of 1837, 1857, 1873, and 1893. The first of these had a monetary origin, but was a financial reign of terror: the danger was not suspected till the ruin fell upon the country. It was due not to distrust, but to misplaced trust. Confidence had been reposed in a fictitious currency which *State* banks had been permitted to foist upon the people. This currency being made legal tender for private debts and accepted by government in payment of public dues, gave those banks an opportunity, which they freely improved, to speculate in the public lands, then being sold at a nominal price to encourage their settlement. A section of land would be bought for a few of the "wild-cat" dollars these banks issued, then sold to settlers for good money at a slightly lower nominal price, which gave a clear profit to the banks, as their paper currency really cost them nothing. When, in 1837, the Government announced in a circular that it would no longer accept the bank notes in payment for land, they at once fell into universal distrust and came home for redemption in such quantities that the banks had to suspend "specie" payments, i. e., declare they had not the gold to redeem their notes in. This currency becoming waste paper in the hands of its holders, and standing henceforth for nothing but their dead losses, was in itself sufficient to induce a partial paralysis of trade and industry, inaugurate a season of

forced selling and slack buying, and depress prices, as commerce swiftly returned to the specie basis, and its promoters realized forcibly their losses. But the panic was ushered in with a crash when some of the honest bankers tried to redeem their notes by selling what property they had at lower prices, which immediately brought down the value of all such property, and, meditately, that of all property.

The panic of 1857 had a different origin, springing from commercial speculation which is not based on spurious money. There was a failure in the transportation line: large investments had been made in railroads that proved unable to pay expenses. As the stock yielded no dividends and rapidly deteriorated, its owners placed it on the market at sacrificing prices. The infection spread to other lines: producers finding demand was falling short, and fearing an extensive and inevitable reduction of prices and profits, diminished production, and, by selling at a sacrifice of profits, tried to forestall the necessity of selling still lower. Here the trouble was aggravated by the low customs duties which had been in operation for some time, and by debilitating the home market for many staple products, had diminished the power of the national commerce to resist the depressing influence of unsuccessful speculation on a great scale. In 1837, too, the industrial system had been weakened by a like cause: the middle point had been passed of Mr. Clay's compromise sliding scale of tariff rates.

Another terror originating in business reverses seized the country in 1873. Like that of 1837, its introductory stage was bank failures, beginning with

that of a leading banking concern in Philadelphia, Jay Cooke & Co. Depositors ran to the banks all through the country to recover their deposits, fearing lest their banks would soon suspend as others had done already. For example, the failure of principal and sureties on one or more large notes held by a bank might render this in turn unable to meet an obligation when presented: the bank would then be broken. The cause of this panic, in turn harking back to the main principle of that of 1837, is clearly traceable to unsound currency. During and immediately after the Civil War prices had ranged very high in the irredeemable paper constituting the money of the nation. As confidence in the Government and hope of an ultimate return to the specie basis were recovered, these prices had gradually fallen, thus putting business on the basis of failing speculation, for it was done largely on credit and with borrowed capital.

The panic of 1893 took rise wholly in fear, on both the purely monetary and the general mercantile principle. Perhaps the distresses of the three former crises,—vividly portrayed by those who had passed through them and in the popular histories,—had schooled the commercial world in forecasting such conditions and judging their effects. It is gratifying, indeed, thus to believe in the country's capacity to learn from experience. At any rate, altered conditions were dreaded in respect both of money and of markets: the danger seemed imminent that the Government might so alter the status of silver in the coinage system as to reduce the currency to a basis in that metal, and by consequence greatly cheapen the unit of

accounts and measures of value.* Still more probable did it appear that the markets for most of the great staples would be impaired seriously by legislation scaling down the customs duties intended to protect those productions in their domestic markets.† That this latter apprehension was the more influential may also be inferred from the fact that loaning rates were but slightly and locally affected. The usual train of developments ensued of course: forced selling, low prices; incomes and wages suspended or reduced; buying for consumption foregone; for production deferred till prices should perchance find a stable bottom; the towns and highways full of misery, beggary and sedition.

* It does not yet appear that this danger has wholly and permanently passed.

† This project was, to a considerable extent, carried out.

CHAPTER IX.

ECONOMIC CHEAPENING OF PRODUCTS—THE FINAL STANDARD AND MEASURE OF VALUE AND WEALTH.

It would be too digressive, in an essay on money, to go into a systematic and analytical discussion of the industrial, as distinguished from the monetary, influences that go to limit or vary the prices of commodities. An instance showing how remote and powerful at once such influences may be, is furnished by the history of the first Crusade and has been finely described by the historian Gibbon.*

Of course the general laws of correlated supply and demand and the highest cost of production that the natural circumstances of each commodity and the demand for it will admit of, are always and everywhere in force: the exceptions, rare and unimportant, being a few articles of extreme luxury, the supply of which is always short of demand.

A force that has been operating at an increasing rate through the nineteenth century to cheapen all products through lowered cost, is the stream of industrial inventions, not only cheapening and quickening the processes of manufacture of particular products, but also, in general, reducing the cost of transportation, and so making the new crop fields and sources of material of imme-

* See the *Decline and Fall of the Roman Empire*, ch. lviii, the text to note 33.

diate and world-wide avail, besides fetching all productions to market at less expense and with smaller loss of time and value. The increase in amounts consumed has not nearly sufficed to balance this influence; though that increase has been great and steady from the multiplication of consumers and the enlarged consumption by the former numbers of population. Nor has money (metallic gold and silver) by sharing, as it has, in this effect, *absolutely* cheapened enough to compensate much of this rise in its relative purchasing power, due to the cheapened production of general commodities.

A product wholly exceptional in this point is labor. Under the absolute cheapening of money, unless the supply of labor (its demand for money) were proportionately augmented, wages should experience a nominal advance, i. e., an advance in weight of metal regardless of its increased, stationary or diminished purchasing power. And, in the long run, this effect has taken place, save where and when the cost of labor has been reduced by increased competition or that of cheaper hands. And since, as a matter of fact, the value of money, in general merchandise, has risen, human toilers have, within the century, enjoyed a double increment of prosperity,—receiving more for their toil, and having the purchasing power of the original wage, or of each given portion of their money, enhanced. Where cost of an article has been reduced in the element of labor, it has not been in the matter of *wages*, but in the time employed.

And here, in the orderly unfolding of the present line of inquiry, we meet a more perfect and absolute standard of value than any form of money. Labor,

as an economic product with a commercial market and rating, has no absolute valuation in any other product: all values are relative and vary by any change affecting commercially either the things in which they reside or that with whose value they are compared. Labor, however, differs from other products in that its value has not been affected *on its own side*,—by changes in itself or its normal circumstances. This peculiar product, measured in time-units, is the nearest approach to the absolute known to economic science: it is the one economic finality. A day's work, the giving up a day to exertion for hire, means something pretty constant and irreducible in the view of mankind. And labor is the one ultimate and indispensable requisite to obtaining any and every commercially valuable thing, i. e., regularly and generally valuable in commerce. Should any commodity come to drop from the upper air to one's hand at call, it would lose its commercial value, just because the element of labor had vanished from the means of possessing it. The constant tendency of all things to cheapen in terms of labor is more than a sign of the advancing subdual of matter and material forces by man: it testifies to the truth that labor is the ultimate and uniform means of obtaining and occupying them; while the sign and fact signified, taken together, declare labor to be the uniform unchanging *measure* of values. All commercial wealth represents labor as the one universal constituent, though the labor represented in a particular property may not have been the exertion of its present possessor. Again, the important truth that "time is money" can be affirmed only on the double

theory that money is a *valuable* commodity, and that labor is the ultimate measure of values: since labor is the source of value and the only product measurable in time. In both its terms, therefore, the proverb represents real value, and so illustrates the first essential of money material.

That human effort is, in the last analysis, the criterion of value, becomes plain when we consider what is the real meaning of expressions of value in terms even of money. A thing is worth what it costs or will fetch in market, i. e., the exertion of human faculty requisite to obtain the thing or the money that stands as its price: the money is only a medium between the thing and the effort. Erroneous judgments are often formed of the dearness or cheapness of things because account is not taken of the cost of money in time and exertion. When a man's wage is two dollars a day an article that he pays one dollar for is cheaper than it is at seventy-five cents with his daily earnings at one dollar and twenty-five cents. The same principle applies to painstaking and attention of any kind, though not estimated by the day or week and though its earnings be combined with the profits on capital accumulated by past efforts. The final test is, how much human effort and time does it take to balance and obtain the goods sought in exchange?

It is because they do not see the intermediateness of the money standard and the finality of the labor standard that men often clamor for such a treatment of the currency as will make it more abundant (in nominal quantity) and a given denominational amount of it easier to obtain: they want a rise in the selling rate of

their products, oblivious of the inevitable simultaneous and compensating rise in the rates at which their proceeds must buy, and of the fact that the price of what they sell and that of what they buy, *taken together* in ratio, represent the price of the goods bought, measured in the effort required for producing and selling the things sold. To take the standpoint of labor (the product whose price is called wages), the compensatory advance of the things it buys is always earlier and generally higher than the rise in its own remuneration. In no case is the selling price completely realized until converted into the prices of goods to be bought. It is like an equation: if each member is affected equally and in the same sense, the result is not changed. People are wont to fix their gaze too separately and exclusively on the first price,—that of the product they *sell*,—while a just interpretation regards this as but a partial translation of labor into objects desired. A rise in the selling price of a product, if met by a corresponding rise in the other member—the prices of its purchases—raises not its purchasing power: the price in producing effort, or the power of the basal standard, is unaffected. A general and uniform rise of prices promotes no interest, unless they are to fall again before some part of the receipts under the rise is spent: labor, therefore, cannot profit by such a rise, even if it includes a simultaneous and proportionate advance of wages. But a rise in the *purchasing power* of earnings—wages and profits,—a rise in the value of money due to the economic cheapening of general commodities, means increased prosperity. And this, being translated, means simply a strengthening of the

purchasing power of human faculty exerted through portions of time, or of time spent in labor.

From the commercial side, furthermore, the prices of commodities, or of particular classes thereof, are often influenced (generally to reduce them) by the acts and policies of governments: by granting monopolies (which raises the prices concerned), by levying imposts and other taxes, by subsidies to transportation, by measures of "internal improvement" (as it is called in the United States), and by commercial treaties and other acts done in exercise of the sovereign power to regulate commerce. A special means, less direct than some of the foregoing, but more efficient than any or all of them, has been the granting letters patent for new and useful inventions. By securing to inventors, for stated periods, the exclusive right to the production of machinery, and to production by processes involving new and useful combinations of mechanical and chemical elements, governments have co-operated with and furthered the spontaneous movements of necessity, and of desire to multiply and cheapen the comforts and conveniences of civilization. More consciously representative of the people than it was a century or two ago, enlightened by broader views of the public utility and of its own mission, the state has been prompted to advance in many ways the industrial welfare of its own separate community and of the world at large.

CHAPTER X.

GOVERNMENT'S RELATION TO COINED VALUES— SEIGNORAGE.

On the monetary side, government cannot legitimately influence prices. Initially, it is true, the state may assist in selecting the unit-names; and even in determining the price numerals by fixing legally the commercial predetermination of the standard unit. But with determining how many grains of metal form the equivalent of a pound or yard of merchandise, government has nothing to do; nor can it vary that amount, save only momentarily, surreptitiously, and with reference to certain classes of persons and products: and this awry and partial influence it can exert only by tampering illegitimately with the money unit, and so falsifying the money of account.*

Such intermeddling, arbitrarily altering the values of the price units, is illegitimate both on other grounds and in particular, because, so far as it is effective and really varies the quantity of metal paid, it belies and dishonors the state guardianship of the honesty and uniformity of the currency: it is the reverse of that guardianship,—it betrays a trust and makes both government and citizens counterfeiters in their payments.

This, we should again remind ourselves, is the one

* This differs from the attendant falsification of *accounts* (due bills or debts) to be noticed hereafter.

primary and essential function of government in relation to money, viz: to provide for the honesty and uniformity of the values issued and uttered under monetary denominations of established and recognized force. Perfectly uniform value through a long time may not be possible, but the approximation thereto in the uniformity of the physical standard (quantity of metal) is possible, and is all that is required. Uniformity in the other sense, or homogeneity of the currency in all its pieces and throughout its circulation, is attainable and commercially necessary: it is secured in the same way,—by making each piece, of any denomination, consist of the same weight of fine metal.

Even where private coinage has obtained, the state has assumed to guard and assure to the buyer the full uniform value—weight and fineness—of the coin. In ancient Rome, before the state took the affairs of minting exclusively into its own hands, a tribe or individual could have metal coined into pieces bearing the name or sign of such private coiner; but those coins also bore a stamp attesting, from the state, their genuineness and full value. In Attica, also, the separate *demes* had a like privilege under the oversight of the central Athenian government. In America, though there were a mint in every State and State coats-of-arms on every coin, there could be no real State coinage, for, to insure the essential uniformity of the coinage throughout the country, the Federal authority must still conduct or supervise through its agents all the refining and minting processes. To the same end sovereign government alone determines or should determine the conditions of the issue of all forms of

credit money: such money ought to be of *one* credit, that of the central government or real state, which may, with exclusive control, keep such currency homogeneous with itself and with the metallic coinage. Wherefore, the emission of bills of credit is prohibited to the separate States of the American Union. For this general purpose of securing all purchasers of money against fraud and loss in that connection, by making each piece quickly recognizable of full value, or the stamp and signature uniformly trustworthy, government also provides, as best it can, against counterfeiting all forms of currency.

The particular authorization of the American Congress to *regulate* the value of coined money might seem superfluous, as already involved in the grant of the coinage power itself, if it referred to changes of the value of denominations through variation of the standard unit. The intent of the Constitution here we may learn from the fact that a duplex coinage system, based on both gold and silver, was in prospect, and from the associated power to regulate the value of *foreign* coins. The latter authority is exercised by ascertaining and publishing the values of those coins in terms of the domestic units: this requires a comparison of the quantity of fine metal to which the foreign denominations answer with that of the standard unit, and also, where the coins in question are of another metal than that in which this unit is taken, an account of the value ratio established between equal weights of the two metals. Foreign coins allowed to pass by weight and not by tale are assayed, to ascertain their fineness, or proportion of pure metal, and rated as

bullion on that basis : as, so many cents to the penny-weight, or a certain weight for 100 cents.

As to the value of domestic coin, there are no two sets of denominations to be compared, and to regulate this value is to ascertain and declare a legal monetary ratio between the two coin metals. When the government was organized it was believed that the ratio of their market values would be so steady that by choosing a coinage ratio approximately identical therewith, the two ratios would keep so nearly identical as to maintain a practical parity of the two varieties of coin in trade : if they did not, this power to regulate the coin values would enable Congress to readjust the coinage ratio and promulgate new values for the coins of one metal in terms of the other, which latter would thus become the sole metal of the standard unit, if it was not so already, at least to the extent of the coin then circulating. The regulation, then, of the value of money coined under a particular system has to do with the mutual relations of its members, and would include the placing one element of the extant currency at a premium over the other. For instance, it might at one time have been announced and decreed that the gold coins in circulation were worth in silver a dollar and some odd cents for every gold dollar they contained, thus recognizing silver as the standard, or *vice versa*, that the silver dollar was worth but ninety-odd cents, thus making gold the standard and a cent the hundredth, a dime the tenth, of a gold dollar. If the occasion had arisen gold would have been declared at a premium rather than silver at a discount, the latter being regarded as the standard metal in the coinage

law then in force. Such a declaration would have covered the payment of debts* in one or the other coin, and, being repeated at every sensible change in the value ratio, might have kept both in circulation.† The object in such a case might be attained by ordering a recoinage at the new ratio: such action, however, would not be in regulation of the value of money left in the hands of the people, but in exercise of the original power. By neither course is the standard varied or prices influenced: if such a result accompanies the change, it is due to a commercial cause,—variation in the cost of the metal.

But if, in the exercise of coinage authority, the quantity of fine metal in the unit is varied, the effect is quite different: nominal prices are moved by government's action. When such action is taken it is always to *diminish* the unit, and so it *raises* nominal prices. This movement of the value of denominations may be effected also by substituting for the existing unit an inferior value in another metal or in credit currency: the most modern depreciations have occurred in one or the other of these latter modes. The former of them arises, as we shall see, when the two metals run parallel or independent in the coinage and one gets overvalued therein with reference to the other: yet in subsidiary coinage we shall find an application of this regulative overvaluation that does not change the unit or influence denominational values; which, therefore,

* In pursuance of the principle of keeping the "obligation of contracts unimpaired."

† See forward, p. 110.

and because it promotes the convenience of trade, is a perfectly regular and legitimate exercise of authority.

Both the power to alter the value of the unit and that to regulate or interpret the value of one species of coin in ratio to another appear to be authentic prerogatives, inherent in the idea of sovereignty; they have been exercised repeatedly by nearly every state that has been organized, and have never been questioned nor discarded. They have analogues in the unlimited powers of the state to regulate commerce and to levy taxes and duties: there is a restrictive force latent in them all. The possession, however, of undoubted authority is one thing; whether, and how far, particular circumstances will excuse its application is another.

Before noticing in detail the administrative depreciations of the currency, with their motives and economic effects, several topics have to be considered; and this point is to be observed, that in controlling the mintage government can *raise* the value of money, by requiring the Mint's customers to pay the expenses of coinage and taking an extra toll out of their bullion: so increasing the cost of coinage, and making the residue, coined of full value and handed back to the bullion-holder, represent to him a larger outgo than formerly. The effect of which is that the producers' valuation (cost of production), and consequently the mercantile price, of the coin is enhanced.

SEIGNORAGE.

The minting toll is called seignorage, though in the technical nomenclature of the British Mint it is distin-

guished as *brassage* when it just covers the actual expense of coinage (wages of mint officials, etc.), the term *seignorage* being applied only when an excess above that expense is charged. From the effect on profits of producers to the Mint there is a limit to such a tax, to exceed which would be to stop coinage and close the mints.

The question has been mooted whether the state ought thus to make the money producer defray the cost of coinage or to make that cost a charge on the public treasury. The question does not arise as to representative coin, since its mintage is wholly a state enterprise: none but the state may produce such currency. While the state buys its bullion for the purpose at the market price, the metal is, in the coinage, so overvalued with reference to the basal money that the gross profit, on paying out the coin, more than balances the cost of mintage.

The case is different of the principal coinage, to which the mints are open for unrestricted production on private account.

The business of producing precious metal from the mines and that of producing money through the mints, like other lines of production, have their necessary and regular expenses, going to make up cost of production. As with other products, so with money that cost includes the expense of the last operation, completing the preparation for market; and again, as with other products, this final item is added to the previous ones in forming the market price. In producing to the arts, the refined bullion is the finished product, but not in producing to the money market, or general traffic:

coin costs more than bullion, and an ounce of metal in coin will buy more general merchandise than an ounce uncoined. It cannot, therefore, in the least mulct the money producer that he pays the expense of coinage, which is the one essential operation in the production of coin and simply puts the goods in shape for the market he is seeking. On the other hand, for the state to defray that charge, and so bear a portion of the cost of production, must reduce that cost in effect, or to the money producer, and would, the effect of other conditions being unaltered, proportionably cheapen money and raise prices: so that no gain accrues to the producer from relieving him of the expense. An attempt to subsidize lines of business where competition must keep rates corresponding with actual cost will necessarily fail.

Moreover, since there is no advantage in having prices high, whether in denominations or in ounces of metal, the state would pay the cost of coinage, without compensation. It is the peculiar case where cheapening does not benefit the consumer,—a fact springing from the nature of monetary consumption. The universal but indirect public concern in the matter in no way requires that the state should become a *partner* in the production by making coinage *free* to the producer: normally, government, as mint conductor, is merely the hireling of the coin manufacturer.

To take the standpoint of the latter,—though we held that there is no competition to keep the price of money down, and so that he would gain by having his product finished *gratis*, still it would be as just that the man who brings bullion to mint and takes away

the coin should suffer tollage as that he should do so who brings corn to mill and takes away the grist; or that the man who fetches a hide to be tanned and carries off the leather should pay for the service rendered; or that the horse-breeder, retaining the foal, should pay his stud-fee.

This does not justify the government, under ordinary conditions, in taking a larger seignorage than required to pay mintage expenses: the excess would be a tax on production, and such taxation should have a special excuse, applying to the particular industry or arising from special public exigencies. Government's relation to the money business not being that of a partner, the idea that profit to the national treasury should accrue therefrom is unfounded. Nor is it congruous with right political theory for the state to discharge with a view to replenishing its treasury any of its functions instituted for the convenience of the people, or any at all except those the very purpose of which is to collect a revenue. The people do not make their money* thus in common, though they may *save* it to some extent by economical administration, and though it may sometimes happen that the receipts from fees in bureaus organized to serve the people commercially, as post-office, registries of land titles, etc., or mints, exceed the disbursements on account of the same offices, since it is impossible to keep the rates adjusted with minute accuracy to the expenses as varied by varying volume of business, etc.

* The phrase is used here in the sense of,—acquire property.

Seignorage, then, is just and expedient, but it has a just limit, and that, ordinarily, is the expense of coining the metal up, as nearly as this can be ascertained.*

It is also advantageous in these three particulars: (1) It has the effect to store up in the toll bullion that amount of the treasury's resources, thus creating a sinking fund, which may be recurred to by coining the seignorage. (2) Since the coin will be more valuable than the metal by the cost of coinage, it is in less danger of melting down, and the circulating volume thereof is more equable. (3) The seignorage offers a sort of fly-wheel faculty for steadyng a drop in price of money through lowered cost of original production of the metal or reduction, by the course of foreign trade, in cost of obtaining it. This faculty would be brought into action by charging an extraordinary coinage rate, which would restore and maintain the cost. Thus, also, the other two advantages would be enhanced.

Such a condition would form the extraordinary circumstance and the public exigency alluded to above, which would justify a tax on money production. This phenomenon, however, a commercial depreciation of money so great and rapid as to endanger mercantile

* The United States has always made its mint charges and deductions on the basis of actual expense, or of reimbursement for any advance payment before the deposit was coined, when it has not coined *gratis* and delivered to the depositor the same weight of coin that he deposited in bullion. This is true also of the charges for the striking of national medals, etc. (authorized by the Coinage Act of 1873), and for the execution of foreign coinage (authorized by a special Act, January 29, 1874).

interests through confusion of prices and loss of credits, is improbable in the economic life of any nation: for it would have to spread over the whole commercial world.*

* In the United States the term "seignorage" appears to be restricted to designate the profit accruing to the Treasury from the manufacture of subsidiary or token coins, i. e., from the purchase of bullion at its market value and the production therefrom of coins whose face value is greater than their intrinsic value. It is the net balance of such coins over the number equivalent, at their current value, to the price paid for the bullion. See Chapter XI, in particular page 108. By the Act of February 12, 1873, the profits of the silver coinage therein provided for were set apart as a special fund, called the silver-profit fund. This is still maintained.

COIN, CURRENCY AND COMMERCE

PART II

CHAPTERS XI-XVIII

**MONEY OF DEPENDENT CIRCULATION—CONCURRENCY
OF INDEPENDENT MONIES**

CHAPTER XI.

REPRESENTATIVE AND CREDIT MONEY—SUBSIDIARY COINAGES—LEGAL TENDER—REDEMPTION.

A glance, at once sweeping and scrutinizing, over representative money, should here continue our survey of state monetary regulations, and precede what is to be said of currency depreciations arising thereunder. Representative money consists of pieces of paper or metal, suitably and authentically stamped or printed, which pass as tokens, or in lieu, of actual money,—to the amount of the denominations imprinted on their faces. So long as these are trustworthy signs of money, they form a convenient sort of currency,—uniform, readily exchangeable, and current with money itself.

Such currency, then, is of two kinds, paper and metallic: the first may specially be designated *credit* money; the second is conveniently distinguished as *token* money, or subsidiary coin: though both circulate merely as tokens of real money, and the metallic variety rests partly, as the paper does wholly, on government credit. Again, both kinds might be called *subsidiary*, or secondary forms, in distinction from the *principal*, or primary, coin, which they represent. The metallic variety is to be considered first, in the subdivisions of subsidiary and subordinate coin.

To introduce the topic, some account is necessary of discrepancies between denominational value and commercial value, or intrinsic purchasing power. There have been periods in the history of many countries

when there were two kinds of real money, a double and heterogeneous primary coinage, each of the two metals being coined in the same system of denominations and flowing together in the stream of traffic. Now, in such cases it has been found that after a time one of them disappears from those channels, prices being determined and exchanges mediated in the other alone. It has been observed, further, that the coins driven from circulation are undervalued in comparison with their associates of the other metal: e. g., that the quantity of metal in such a coin of the denomination, say, of the *unit*, was commercially, or for non-monetary use, worth more than twice the metal in a coin of the other kind, the denominational and currency value of which was one-half that of the first coin. In other words, either there was a discrepancy at the start between the commercial and coinage ratios, or else, from some commercial cause, the adjustment of those ratios got deranged, the former ratio having varied through appreciation of the one metal or depreciation of the other relatively to its fellow and to general merchandise.

The cheaper metal, if the disturbance be due to *its depreciation*, falls to a discount in making purchases: but since its debt-paying power remains intact, that of the companion metal must, value for value, proportionately diminish. Consequently, the cheaper money persists in circulating, becomes more abundant and begins to be offered in all transactions in preference to the dearer. Prices, therefore, are raised nominally, being adjusted to this depreciated coin; then, if in any purchase the dearer is offered, its premium is not reck-

oned, and the seller reaps an extra profit. Hence the dearer money, value for value, falls below the cheaper also with respect to purchasing power in general trade. The nominal value of the depreciated coin is first discounted to its commercial value: after the readjustment of prices the commercial value of the relatively appreciated coin is discounted to its nominal equality with the cheaper. The result for the coins undervalued by the new standard is that they find their way as fast as possible to places where their nominal does not slight their actual value,—to the money-changer's drawer, thence to the channels of foreign trade and the artisan's melting-pot. If the discrepancy should be due to a positive appreciation of the one metal, so that its coins are undervalued, prices, following always the overvalued currency, remain unchanged; the appreciated coins at once go to a premium on 'Change and retire from circulation as in the former case. Now where the primary money is monometallic, advantage is taken of the influence of an inequality of the ratios to give a money use to a second metal and to provide coins of more convenient size for the higher or lower denominations according as the principal coinage is of the less valuable or the more valuable metal. Such *subsidiary* coinage is overvalued, each piece containing less of the fine metal than it takes to equal its denominational value in the basal coin: e. g., the United States half-dollar contains less than half the silver which is the value equivalent of the gold constituting the standard dollar, and less than a tenth of the silver equivalent to the gold in a half-eagle. The overvaluation is extensive enough to with-

stand any probable or precedented fluctuation of the commercial ratio: if the metal thus treated is that whose value tends downward in relation to the other, the changes are likely only to accentuate the overvaluation. Such is the case with British and American subsidiary silver: yet for about fifteen years after 1850 the intrinsic value of such coin in Great Britain, which alone at that time had a subsidiary silver coinage, must have approached their token value in the fundamental gold; owing to the great commercial depreciation of the latter metal relatively to silver, which in the United States greatly multiplied the existing undervaluation of the silver coins as independent money, and so hurried from circulation those that still remained and led to the law of 1853, providing for the future coinage of the fractional silver pieces as dependent (subsidiary) coins, i. e., at a ratio *over-valuing* them. By this means the smaller coins are made worth more as currency than as bullion, or the contained metal is of higher price in the money market than in the metal market: thus they are secured from melting down and from exportation as bullion to make coins in other countries,—unless, indeed, the coinage of some country should overvalue the metal still more in relation to the primary metal, or price money. But since in this way the principal money, or standard coinage, is undervalued in ratio to the subsidiary, something must be done to prevent the latter from expelling the former out of the circulation and replacing it as standard money of business and prices. This is effected by limiting the amount of debt that may, in any one instance, be discharged by offering subsidiary coin

in payment; or, in monetary parlance, by restricting the "*legal-tender quality*" of such coin. Consequently the primary money or its representatives of the larger denominations (unit-multiples) and unlimited tender power will be required for the larger payments and the great bulk of business, the subsidiary coin (in unit-fractions) being restricted to making "change" in these larger transactions and mediating the smallest ones: e. g., upon the institution, in 1853, of silver token currency in the United States, the amount of debt, public or private, for which those fractional tokens were legal tender in one payment was fixed at five dollars as the maximum: subsequently (by Act of June 9, 1879) this maximum was doubled.

As is well understood, the very smallest denominations are coined only as tokens and of metal baser than silver, as nickel and copper: this has been so in the United States from the institution of the coinage system in 1792. And the legal-tender quality of such coins is reduced proportionately, being restricted here to twenty-five cents (Act of February 12, 1873, sec. 16).

The status of representative in relation to principal coin may be illustrated from the history of subsidiary silver in this country. In the beginning, as at present, the three leading fractional denominations,—half-dollar, quarter-dollar and dime,—were struck in silver only. But at that time silver and gold were coined independently as two primary monies at the fixed ratio of 1:15, and these fractional pieces were minted of full value, containing each the proportion of the metal in the standard *silver* unit answering to the frac-

tions that their denominations were of the unit (save that the dime was slightly under its proportional weight), and they were as final and independent money as the largest silver coin, the unit or dollar. The above coinage ratio was based on the commercial, which did not change sensibly for several years. In 1806, however, it was found that owing to silver having become worth a little more the dollar coins were being bought for export. From the same cause their coinage had already practically ceased, only 321 of them having been minted in 1805. Consequently, by Executive order of May 1, 1806, it was directed that all silver deposited at the Mint should be coined in the smaller denominations. These fractional pieces do not appear to have been affected as much. The dollar was the best piece to export and the smaller pieces were needed at home to cash small balances. So that, to a great extent, they persisted in the circulation. But before the dollar coinage was suspended, there was a period of four years (1797-1800) in which no half-dollars were coined and six years (1798-1803) during which no quarters were minted. The intermission in quarter-dollar coinage for the seven years 1808-1814 is of less significance, as there was a largely increased issue of half-dollars all through that period. Yet most of these may have quickly abandoned the circulation.

By 1820 gold had appreciated in the market relatively to silver, and the gold coins of the United States, undervalued in domestic circulation, disappeared in foreign trade and left the home market to paper currency. In 1834 the coinage ratio was changed

from 15:1 to 16:1 by diminishing the weight of the gold coins. The new ratio again undervalued silver slightly. In consequence, gold became the standard, and silver retired before it save in so far as the fractional silver persisted in circulating, by reason of its great convenience as change, and in spite of the fact that it was worth more as bullion than as money after the gold unit came to prevail. A readjustment of the ratio, or a new adjustment favorable to silver, appears to have been attempted in the Act of January 18, 1837, which reduced the standard weight of the silver dollar from 416 to 412½ grains.* Then, as we have seen, the gold unit was further depreciated about 1850 from a commercial cheapening of the metal, thus enhancing the pressure to banish silver from the circulation and making its coinage still more unprofitable compared with selling it to the arts and to foreign trade. The dollar coin had immediately left the circulation, as had been intended: but also the fractional silver had nearly all gone the same way, as was inevitable, though not intended nor desired. Hence, the law of February 21, 1853, making these fractional denominations an overvalued token currency, and directing that the Mint should purchase bullion for their coinage to the profit of the Treasury.† What they

*The weights of the gold and the silver dollar, as fixed in 1834 and 1837, respectively, have never since been altered.

†It does not militate against the statements in the text, that the coinage of the silver dollar, resumed with the issue of 1000 such coin in 1836 and 300 in 1839, was continued on a small scale (though the production of the unit coin, and of halves and quarters as well, came near the vanishing point in 1851-52);

thenceforward *represented*, as correlative *redemption* money, was either gold coin or the silver *dollar*, which was not touched by this law. According to a later provision of Congress (Act of June 9, 1879), the silver tokens are redeemable in lawful money (of either metal or its paper representatives) when presented in sums of twenty dollars or a multiple thereof.

The other variety of subsidiary coin is made in higher denominations: the silver dollars of the United States are an example of it in unit denomination; in France, where the money unit is smaller, it occurs in multiples of the unit as well. The distinctive feature of this variety is its unlimited legal-tender force. A state with a currency based wholly on the cheaper metal, if

nor that gold bullion continued to be deposited at the Mint and coined into half-eagles and quarter-eagles during the period 1818-1833. Silver halves and quarters were coined throughout the period (the '60's and early '70's) when fractional United States notes—"shin-plasters"—constituted the stock of small change, but they did not circulate much. It should be noted in this connection that in both the period of undervaluation of gold and that of undervaluation of silver no seignorage or deduction of any sort was charged on deposits of bullion at the Mint, unless in reimbursement for paying a depositor in advance of coinage. (Act of 1792, sec. 14; Act of 1834, sec. 2.) Again, the fact that no action suspending the issue of the silver dollar or of any gold coin was taken after the suspension of the former in 1806, does not show that the occasion did not recur. Monetary regulations have been kept distinct from the outward regulation of commerce since Jefferson's administration. It may well be noted that the order discontinuing the coinage of silver dollars by reason of their exportation was followed the next year by the Embargo Act and in 1809 by the Non-Intercourse Act.

it used gold money at all, must have it in this form,— coined to represent the higher denominations and qualified to pay the largest amounts; while, as under a system based upon it, gold could not be made to furnish convenient small change. But, like its fractions, the silver dollar is now overvalued, though at a different ratio; is representative of gold, though on different legal grounds; and restricted in volume, or amount coined, though of unimpaired current strength.

The change in the legal status of the silver dollar, unaffected by the Act of 1853, began in 1873 when the coinage of the standard or independent silver dollar (of $41\frac{1}{2}$ grains) was prohibited and a sole standard fixed in gold. Thus silver was formally demonetized as primary money, while this effect had actually been reached already under the ratio of 1834, supplemented by the lower cost of gold due to the opening of new sources in Australia (1845) and California (1849–1851), which made the dollar coinage unprofitable for use as United States money.

The increased production of silver bullion, dating from the discovery of fresh sources in Nevada in 1867, and the discontinuance of the unrestricted production of silver coin in Germany in 1870, had made the metal so much cheaper that the independent coinage of the silver dollar at the ratio which before had made it unprofitable would now be profitable. Accordingly, the minting of dollars, as well as halves and quarters, had an enormous increase, beginning in 1869. Hence the Act of February 12, 1873, abolishing the standard silver dollar, now so cheap that a shifting to that standard must seriously impair private obligations and un-

settle domestic commerce,—and substituting the trade-dollar, of 420 grains, which was made subsidiary, like the other silver coins, with legal-tender limit at five dollars.* It was in compromise with an effort to re-establish the coinage of the silver dollar as an independent money that the Act of February 28, 1878, was passed, over Executive veto, providing for the coinage of a limited number of ounces into dollars at the old ratio (that of the Act of 1837), but on account of the government, and from bullion purchased for the purpose, as in the case of the trade-dollar and the other subsidiary silver coins after June 1, 1853, and as with the "minor," or base-metal, coinage.

*By the Act of July 22, 1876, the trade-dollars were deprived of all legal-tender force, and the Secretary of the Treasury was authorized to limit their coinage to such an amount as he should deem sufficient to meet the demand for them to export. Their coinage finally ceased in 1878, having continued through five years. February 19, 1887, the authority to coin such dollars was repealed, and provision made to exchange them for "standard" silver dollars or subsidiary silver coin, and for their retirement and recoining at public expense. A last enactment relating to these coins was contained in a proviso to a clause of the Sundry Civil Appropriation Act of March 3, 1891, as follows:

"RECOINAGE OF SILVER COINS: For recoining of the uncirculated fractional silver coins abraded below the limit of tolerance in the Treasury, to be expended under the direction of the Secretary of the Treasury, one hundred and fifty thousand dollars: *Provided*, That the Secretary of the Treasury shall, as soon as practicable, coin into standard silver dollars the trade-dollar bullion and trade dollars now in the Treasury, the expense thereof to be charged to the silver profit fund."

Since the metal in these dollars is overvalued in ratio to gold (owing to the lowered cost of silver) and their legal-tender power is unlimited, they should, by the principle already stated, supplant the gold money: the reason they do not is that they themselves rest on and represent gold. They are convertible to gold and kept at a parity therewith, because by legal definition there is now but *one* dollar, and that is a defined weight of gold: and the name "one dollar" stamped on a piece of silver can only mean that portion of gold;—it must be interpreted by the legal definition of the unit. This is true unless the law of 1878 amended that of 1873 in respect of this definition, restoring the double meaning of "dollar" in the coinage system, which it did not. Moreover, it is a declared purpose of the government to maintain the parity of all current "dollars," or of the unit in both gold and silver,* on a gold basis, since the real dollar is of gold: this has an effect to keep the silver "dollar" as "good as gold" in popular estimation.

This status of the United States silver dollar, as just explained, accounts for the fact that that dollar buys more than its weight of bullion silver, or of a silver coinage that circulates on its own basis, carrying no value but its intrinsic value; such as the Mexican dollar, which, though it contains more silver than the United States dollar, is worth but half as much, according to the present value of the white metal. One American dollar buys two Mexican, because it stands

*Acts of July 14, 1890, November 1, 1893, and March 14, 1900.

for a gold dollar. Since this dependent and representative relation of the United States silver dollar is the only fact whereby its enormous superiority to its weight in its own metal can be accounted for, the fact of that superiority is a proof that such is its relation.

But it is not merely faith in a government which keeps the silver up to the gold standard. That this factor, the public credit, is correlated with the quantity of overvalued coin in circulation, and that much depends on keeping bounds set to the issue of such currency, appears also from the situation in France and the other countries of the "Latin Union" (Belgium, Switzerland, Italy, Greece, Roumania, Servia and Spain).

The Latin Union maintains a double-coinage system in which silver is overvalued even more than it is in the United States, and yet allows gold to circulate abundantly beside it. This is effected solely by restricting the issue of silver, without impairing its debt-paying capacity or guaranteeing its parity with gold. The restriction of its amount would appear to be closer and proportionably narrower than it is with us. Theoretically both metals are standard, and legally the silver coinage is independent, though not free. In reality it is subsidiary and representative of the gold standard; which it does not displace because it is insufficient in quantity to buy the gold up. Nor can anyone amass credit enough to borrow it all on speculation, and pay interest in silver or have the interest coupons pass for money. Moreover, there is little or no outward tendency of gold from these countries: the commerce of most of them is chiefly at home or with other members

of the Union. Their enormous expenditures as states (to support the governments and carry on their operations) are made at home and affect only the domestic circulation and equilibrium. French gold, by far the most abundant of these Latin monies, shrinks from foreign investments generally,—indeed, little goes out for industrial or commercial exploitation of French colonies,—while its volume is augmented steadily by the favorable balances of France's foreign trade.

Under such conditions those governments need not define the unit solely in gold, or publicly recognize their obligation to keep the current measure steady and all the circulation uniform, i. e., to maintain the equality of the overvalued and restricted coinage to the standard. Their system is secure, as ours is, until the restriction on silver seems likely to be removed.

The grounds of the obligation in question disappear where *both* metals are coined without restriction and on private account, when commerce comes to a basis and a single standard in the one overvalued. The obligation arises only where business is established on a monometallic base and the rival metal is thrown into the currency as a coinage overvalued from the start and limited with the express purpose of keeping the measure of values and the basis of commerce undisturbed.

If our present silver dollars were not coined exclusively on public account, if any holder of silver bullion might become a coin-producer, their issue, even though limited, could hardly fail to expel gold and raise prices, as then government could scarcely be expected to keep them at par on a gold basis. On such a plan, govern-

ment might go on buying the amount of metal to be coined, but instead of paying the market or bullion price as it does now, would pay the currency or legal-tender price of the coin, and so would turn the profit of coining at an overvaluation into the pockets of the bullion-holders thus patronized. But the current parity of such a coinage with the unrestricted coinage forming the monetary basis, can be secured only by making it convertible in the latter through the agency of the national treasury, which cannot become charged with this redemption, except at a loss, unless it first receives the profits of the coinage. Consequently any attempt to maintain on private account an overvalued coinage of full legal-tender quality, even though limited in amount, must end in coming to a new basis in the restricted coin while the unrestricted withdraws from circulation. And, in fact, the proposals, made during the pendency of the standard-silver coinage bill of 1878, for a limited coinage of the silver dollars to the profit of private producers, had in view the removal of the limitation at an early day, so that silver might be free to occupy the position of standard thus accorded to it and to fill the room yielded to it in the circulation. It is noticeable, further, that not even if the Treasury coins silver at an overvaluation solely on its own account, is it secure against loss in redeeming such coin when the bullion is bought on a falling market; for then on redemption, the coin is worth less in the market than it was when issued.

The risk of loss by redeeming fractional silver, of limited tender-quality, is *nil*; for such coins are indis-

pensable as change, and will therefore not seek redemption unless issued in such excess of the needs of trade that there accumulates in its tills a superfluity which would be more useful in money of unlimited tender-power. Nor, though the overvalued silver dollar might desirably be replaced with paper,* is there serious danger of its seeking conversion unless the amount coined exceed the credit of government. If this should fail to bear up the silver currency, the holders of the latter would try to get it changed to primary money or use it in paying debts: for such dollars would then be as cheap as their contained metal, sinking to a discount with gold and becoming easier to obtain. Before the Treasury could buy back as many of them as its means admitted of, and as in any event the bulk of them would remain outstanding in the circulation, they would drive out the dearer money and shift trade to a silver basis with an elevation of current prices. It is government credit, then, that spans the gap between the nominal and intrinsic values of these dollars, as of all token coins, keeps them at a monetary par with gold and makes them assist, instead of expelling, the primary money. The resources and honesty of government unite in determining its credit: each element is indispensable to make good its guarantee of honest and uniform dollars throughout the currency.

*An extension of the facilities theretofore furnished for holding this currency in paper form by means of silver-certificates, was provided in sec. 7 of the Act of March 14, 1900.

CHAPTER XII.

PURE CREDIT CURRENCY—CERTIFICATES.

The pieces of currency called credit money are money potentially,—by commanding money. The paper, in distinction from the metallic, variety has *no* intrinsic value, and rests *wholly* on the credit of the organ issuing it. In recognizing and accepting such currency, one recognizes the ability and readiness of somebody to furnish money at call. The paper pieces are either certificates that the Treasury holds coin “payable to bearer on demand” or general promises to pay coin,—promises by government or some institution authorized to make them,—which may be as good as coin certificates. In any sort, behind and beneath their circulation is the belief that the money-property they purport to represent will be forthcoming when asked for. The paper is the representative *of* value, value in the form of money, the money itself being the *representative value*, i. e., the representative form, or commercial standard and depository, of value.

Government has nothing to do with the lowest form of circulating credit, viz: the notes or drafts of individuals and private corporations. Such paper, whether white or blue, circulates by indorsement of payee, and its sphere of circulation is coterminous with that of the maker's or drawer's credit.

When such local bills of credit are enforced as money, i. e., made a legal tender for debts, they are

money according to the strict definition,—they form a kind of paper currency. The authorization of the separate States to charter banks of issue,—in violation of the constitutional prohibition of the States' emitting bills of credit,—inaugurated in Jackson's administration the reign of a currency of that kind. Of course it made a heterogeneous and inconvenient medium, as the bills thus emitted, and made current by government's acceptance, had as many bases of credit as there were banks of issue: for they were not connected with the State treasuries. This was that "wild-cat" money which played such havoc in 1837.

At present the bills of credit issued by local banks are not carelessly foisted on the country to any amount regardless of the power of redemption, but are limited in amount and effectually *endorsed* by the general government, so that they are homogeneous with one another, all resting ultimately on the national credit like the other forms of paper money,—with which also they accordingly maintain a steady parity. This security is effected through salable, interest-bearing bonds of the government, deposited and held in the national treasury* in sufficient amounts to cover the circulation of the banks. The notes constituting that circulation, and issued to the banks by the Comptroller of the Currency, may equal, but not exceed in amount the par value of the bonds deposited for their security. And the amount of notes issued to any banking association may not exceed the amount of its

*Public money deposited with banks is secured to the government in the same way.

capital stock actually paid in. The Comptroller of the Currency is authorized to require additional deposits of bonds or of lawful money in case the market value of the bonds originally deposited falls below their par value. Previously to the Act of March 14, 1900, there was a certain degree of fixed security, pre-established on constituting any association a bank of issue, provided against loss from such a fall, in the limitation of the circulating notes of banks to an amount less than the par value of the bonds deposited to secure them. The margin of difference protected the holders of bank notes against loss from that extent of depreciation in government credit. For many years this extra safeguard has been needless, but when the national banking system was instituted (1863) the credit of the United States was not what it is now.

Bank notes, however, are a specialized form of paper money : a simple and more obvious form is had in government's own notes, based immediately on its resources and redeemable at the instance of the *bearer*. Of course with these obligations there is no question of interest, as they are themselves current money and legal tender : though they be procured in exchange for bullion at the Mint, one does not obtain them by giving up a readier money, as he does in buying bonds. It should perhaps be said here that at present two varieties of government notes are recognized in our country, viz: United States notes and Treasury notes. The distinctive and generic characters of each are that they are government obligations, payable *on demand* and without interest.

These government notes constitute a national debt,—a standing debt that bears no interest. The bank notes imply as their basis a bonded, or interest-bearing, debt. And how can there be a safe, uniform or remediable credit money that neither is nor represents a government indebtedness? The bills of the Bank of England, Bank of France, etc., rest finally on the credit of those states, and the ratio of the market value to the face value of those bills indicates in each case the status of the national exchequer, the standing of the state as a business person or firm. So it was with Mr. Hamilton's "Bank of North America" and its successor, the "Bank of the United States," whose loans did so much to stimulate industry and build up national prosperity when the century was opening.

Both the bonds and notes—bills of credit—of government represent the coin in which they are payable. The notes are payable "in coin," and as there are at present coins in both gold and silver legally possessing standard unit value,—in either kind at option. Under the policy to maintain the parity of gold and silver and of all current dollars, the Treasury waives this option and leaves it to the holder of the note. The bonds also, when not expressly to be paid in gold, are payable in coin, i. e., in whatever coin may be the basis of the business of the government and nation according to the monetary policy prevalent. The bank notes being, in the first instance, payable in just that coin, would also come to be redeemed in it if the bonds should have to be re-sold and the proceeds used to redeem: for those proceeds depend on what the bonds are payable in. And if either the bank notes are re-

deemed in government notes, or the proceeds of the bonds used to redeem are realized in government notes, the result is the same, and is as good as specie redemption so long as the government's notes are at par. So that the cash value of the bank notes is the same in any event provided government's credit holds out, and is always uniform with that of government bills of credit of like denominations.

I. The United States notes, known popularly as "Greenbacks," date, like the national banks, from the time of the Civil War, and rest on the general credit—honesty and resources—of the government. In the market they bore, at different times, various values below their face value, but after the end of the Rebellion came in sight they appreciated steadily; on the 1st of January, 1879, when their redemption in coin began, they had long stood at par. For, this "Resumption of Specie Payments" had been provided for and advertised four years ahead, in the Act passing on January 14, 1875. By this the duty was devolved on the Secretary of the Treasury of redeeming the legal-tender United States notes in excess of \$300,000,000 in a certain ratio to new issues of national-bank notes, the banks being authorized by this Act to increase their circulation: redeeming an amount equal to "eighty per centum of the sum of national-bank notes so issued to any such banking association . . and to continue such redemption as such circulating notes are issued until there shall be outstanding the sum of three hundred million dollars of such legal-tender United States, and no more. And on and after the first day of January, anno Domini, eighteen hundred and seventy-nine,

the Secretary of the Treasury shall redeem, in coin, the United States legal-tender notes then outstanding, on their presentation for redemption at the office of the assistant treasurer of the United States in the city of New York, in sums of not less than fifty dollars." At that time "coin," in relation to large sums, meant *gold* unequivocally, and so these notes, in sums of \$50 and upward, became, in effect, gold certificates.* To effect this redemption the Secretary of the Treasury was authorized to use any surplus revenues, supplementing them, if necessary, by selling bonds of the United States for coin.

*By Joint Resolution of July 22, 1876, the Secretary of the Treasury was authorized, "under such limits and regulations as will best secure a just and fair distribution of the same through the country," to issue fractional silver coin in exchange for such notes. But that issue was limited to \$10,000,-000, and the legal-tender notes were here simply an intermediary in substituting silver for fractional paper currency; they were not to reissue save on the retirement and destruction of a like amount of such paper, the same amount, representing the destroyed fractional paper, being carried to the sinking-fund. This proceeding was devised primarily to quicken the distribution of an amount of subsidiary coin and the substitution of silver for the fractional currency—then an anomalous and troublesome *fiat* money,—thus subserving both the credit of government and the convenience of domestic commerce. That substitution, provided to be carried out through direct exchange and redemption of the fractional currency with the coins, had been required by the Act that reconstituted the circulation generally—that of January 14, 1875,—and also by Act of April 17, 1876, which latter also required that the fractional currency so redeemed should be accounted as a part of the sinking-fund.

II. The Treasury notes were instituted by the Act of July 14, 1890, and are so named because with them the Treasury Department was directed to buy silver for coinage into "standard" dollars. They were given unlimited legal-tender force, like those dollars. In the Act of February 28, 1878, no mode of payment for the bullion was specified. Doubtless under that law purchases had been made partly with United States notes, but mostly, it should appear, with dollars coined from preceding purchases, or the certificates authorized by the same Act to be issued for deposits of such coin. Any Treasury note, then, first appeared in exchange for silver bullion. These notes were not silver certificates, however, though the amount outstanding at any time was to be just equal to "the cost of the silver bullion and the standard silver dollars coined therefrom, then held in the Treasury purchased by such notes;" and though it was directed that two million ounces should be coined each month until July 1, 1891, and afterwards "as much as might be necessary to provide for the redemption of the Treasury notes." For these were to be redeemed, on demand of the holder, in gold or silver coin at the discretion of the Secretary of the Treasury, "it being the established policy of the United States to maintain the two metals on a parity with each other." The carrying out that policy gave the actual option to the holder of the note. Accordingly, it was found necessary to establish and maintain a reserve of \$100,000,000 in gold in order to secure the Treasury notes. This placed them on a special footing as compared with the "United States" notes.

Now, however, by Act of March 14, 1900, a gold reserve of the maximum amount of \$150,000,000 is provided for the redemption of both classes of notes together. If the Secretary of the Treasury is unable, by the methods prescribed in the Act, to keep the fund of gold coin and bullion at or above the minimum limit of \$100,000,000, it is made his duty to borrow enough money to raise the fund to the maximum limit and to issue and sell bonds for the debt so incurred. It is also provided that when notes are redeemed they shall be held as part of the reserve until they can be replaced with gold, when they may again be paid out for any lawful purpose, except "to meet deficiencies in the current revenues." These two provisions hark back to the experience of the Treasury with the former redemption fund of the Treasury notes, in President Cleveland's second term, when the revenues of the government fell short of its expenses and that reserve dwindled, whether through irregular drafts upon it to meet expenses, or by the notes coming home for redemption in large amounts; so that it became necessary to sell bonds in order to replenish the fund.

Other paper representatives of money are coin and bullion certificates, which certify that a stated weight of bullion or amount of coin has been deposited with government and is held for their redemption. For convenience they are substituted in the circulation in the room of the metal, bearing its value, commercial and monetary, and having no credit quality further than as resting on the faith of government as trustee for the holders of the certificates.

I. Bullion Certificates.—By Act of March 3, 1853, an assay office is required to be established in the city of New York for the receipt and for the melting, etc., of gold and silver bullion and foreign coin, the treasurer thereof to be the assistant treasurer of the United States in New York; and it is enacted that this officer shall give the usual receipt, stating the weight and description of the metal or coin; and also, after the operations of melting, etc., shall issue his certificate of the net value, payable in coins of the same metal as that deposited, and receivable during sixty days from its date in payment of all debts due to the United States at New York. This, in effect, makes such certificates money over a certain locality and during a limited period. They are made payable at either the Mint of the United States or the office of the assistant treasurer in New York, at the option of the depositor, to be expressed in the certificate.

II. Coin Certificates, silver and gold, are made receivable everywhere and at all times for all public dues, and may be reissued without restriction. Legal-tender quality is not expressly given them, and need not be, since commerce at once gives them the standing of the coin they represent, having implicit faith in the integrity and ability of the keeper of that money, and government's acceptance of them completes the circuit and brings them to full equality with the rest of the current medium through the whole extent of its circulation. These certificates are issued on deposits of gold and silver coin, respectively, with the Treasurer or any assistant treasurer of the United States.

1. Silver Certificates were instituted in connection with the "standard" silver coinage in 1878. In the Act providing for that coinage their issue was authorized in denominations of \$10 and upwards, corresponding with the denominations of United States notes. By Act of August 4, 1886, the denominations were reduced,—that of \$5 was made the largest and those of \$10 and above were to be exchanged for those of \$5 or less. Now, by Act of March 14, 1900, it is prescribed that at least nine-tenths of their total volume shall be in denominations of \$10 and under, an amount not to exceed one-tenth being authorized, in the discretion of the Secretary of the Treasury, in denominations of \$20, \$50 and \$100; and that when, in order to keep within this limit, denominations of higher than \$10 are retired and canceled and lower denominations substituted, the change is to be offset in the currency by the opposite retirement and cancellation of a like amount of United States notes of lower denominations than \$10 and the substitution of such notes in denominations of \$10 and upward. A bill for \$10 is to be had in either form. Probably it is worth while to notice these details in passing.

2. Gold Certificates—provided for by the Act of March 14, 1900—may be issued in denominations of not less than \$20; one-fourth at least of the amount outstanding must be in denominations of \$50 or less; in the discretion of the Secretary of the Treasury they may be issued in denominations of \$10,000, payable to order. In two cases their issue may be suspended: (1) In the discretion of the Secretary of the Treasury, when the amount of United States notes and silver

certificates in the general fund of the Treasury exceeds \$60,000,000; (2) his authority to issue is suspended in case the gold coin in the reserve fund for the redemption of United States notes and Treasury notes falls and remains below \$100,000,000. In these provisions relating to gold certificates we see an effect of the recently increased outputs of gold and gold coin; just as in the legislation of 1849-1853 providing new denominations of gold coins—the double eagle and one-dollar pieces (March 3, 1849) and the three-dollar piece (February 21, 1853)*—and providing for gold bars or ingots with the weight and fineness stamped on them, and for bullion certificates, etc.,—the influence of the new gold of that time is manifested.

III. Currency Certificates are the remotest form of money, representing deposits of United States notes, and so standing at a second remove from the actual metal. Their status in the circulation is like that of the coin certificates; and for all three varieties the monies they represent (silver dollars, gold coin, and United States notes, respectively) are held as trust funds by the Treasury and may not be paid out except to redeem the certificates for which they are severally pledged.

So, then, we have in the United States all these grades, species and varieties of current medium (about eight sorts), ranging from stamped bars or disks of the refined and alloyed metal (which pass by weight) down to currency certificates, which represent the cur-

* The coinage of the three-dollar and one-dollar pieces was discontinued by Act of September 26, 1890.

rent obligations of the government to pay the standard coin.

Just as, in order to monetary homogeneity, there must be but one economic commodity used as a standard of value, and but one authority coining or stamping it for currency, so, too, all the paper money of a country must rest on the credit of one and the same financial organ or agency, if the whole paper currency is to be homogeneous with itself. Every piece of credit money should depend *finally* on the faith and competence of the same agency. To this end, where a portion of the paper currency consists of notes or certificates of the national treasury, a clear connection must be maintained between that organ and any other organ or body, local or general, that is permitted to function as an emitter of bills of credit. A conclusive reason, then, why the one security of credit money should be that of the general government, is that this organ is, at any rate, involved somewhat in the credit-money business. Another reason is its office as sole authority over coinage,—all independent monetary functions should reside in the same head functionary. A third reason, underlying also its coinage office, is its prominence, centrality, power and responsibility,—the fact that all persons and interests within the nation look to its authority. Finally, the *parity* of the paper with the metallic currency is most feasible when both are effectively controlled by one central power.

The convenience and security of domestic trade require that every portion of the circulating medium should be, name for name, of equal value with every other portion and equally good for utterer and receiver

in any two different parts of the country. To this end, there must be one metallic standard for money and one credit standard for its representatives, that there may be no preferred coin and no preferred paper in the currency: while the maintenance of territorial uniformity and denominational homogeneity must be committed to one central authority, which, to do the office, must have substantial control of all branches of the currency. This function, like the guarding of the purity and authenticity of the currency from counterfeiters, naturally belongs to the central or national government. Only by such unity and centrality of financial administration can coin and paper severally be kept homogeneous throughout a country: while their *mutual* parity, not always assured under this singleness of control, is impossible without that. A people or community that does not rest the value of all its money on the guarantee of a single central organ cannot, however united otherwise, be a nation financially or commercially.

PRESENT STATUS AND RELATIONS OF THE "TREASURY NOTE."

The peculiar origin and status of the "Treasury note" and the fact that financial discussion has often been focused intently upon it, appear to justify a particular examination of that form of bill of credit, though this necessitates adding a special section to the present chapter.

The Treasury notes have always been re-issued after redemption, i. e., the Treasury has paid them

out again in disbursements. Then large holders of them could bring them to the Treasury again for redemption. Thus an "endless chain" of calls on the government for gold coin was made possible by placing a special gold reserve behind these notes. This possibility was first realized when, as twice happened, the notes were suddenly presented in such quantities that new bonds had to be made and sold to restore the reserve.

This increased the expenses of government by the interest on the new bonds. It had to pay out so much basal money—while its gold receipts were not over half its revenue—that it must borrow more and swell its interest charges. To state the case from another standpoint, government had to pay current debts so rapidly (redeeming in coin is only paying current debt) that it must create a time-debt, must increase its interest-bearing indebtedness in order to meet the obligation it had assumed with respect to a part of its non-interest-bearing debt.

The incident just mentioned illustrates finely the dependent, non-intrinsic quality of credit money, whereas the usual infrequency of redemption makes some regard it as real, or basal, money. Thus McLeod, the British banker and economist, holds that money is a representative of debt, and so defines it. "Without debt," he says, "there can be no money." If we look to the historical development of money, and consider it, as originally it was, dissociated from state authority, we shall see the error of that view. Only when the word "money" is used loosely in the sense of "currency" (paper money), can it be said to stand for debt,

and then the debt is but a mediate condition between the currency and real money: the condition being due to the surpassing convenience and comparative worthlessness (very low specific value) of the substance of which, in the physical sense, the currency consists. Furthermore it is only the debt of government—a debt created for the purpose—that is generally so represented,—not an ordinary, economic debt. So far from money representing debt, it is more correct, in such cases, to say that debt represents money, and takes the place of the latter according to the credit of the debtor (or trustee), i. e., the security of the property covered by the debt (or trust). This is the true relation.

To return from the digression of the preceding paragraph: our Treasury might have canceled its redeemed notes. Then, in issuing bonds to get the gold in which it redeemed them, it would have merely substituted an interest-bearing debt for a non-interest-bearing debt. As when a man gives a time note with interest for funds whereby to pay current bills without interest. When the Treasury reissues the notes, it simply has recourse to its credit in making payments to the amount reissued: its current indebtedness is increased on account of its current expenses exceeding its current revenues. Instead of leaving some bills unpaid it contracts a debt to the public generally. Nothing, therefore, is to be specially charged to the redemption of the notes except the interest on the funded debt whereby gold was replaced in the Treasury.

But why was the gold reserve established? Why need these notes be redeemed in gold? They need not be, if the government were willing to put the country

on a silver basis at the existing coinage ratio, and nullify the statute which defined the monetary unit in gold. Either that enactment must be made practically void, or that clause of the Act of July 14, 1890, requiring silver to be coined for the express purpose of providing for the redemption of the notes, must be made of no use or force. The second alternative was chosen. To have forced their redemption in silver would have made that metal the standard, for though legally they were payable "in coin"—specie of either metal,—yet to impose that whose coinage unit is the less valuable would imply that the other is preferable and would be felt as an injury. Such action would be a failure to uphold currency to the gold level, and so would thwart the purpose of the resumption of specie payments. It would be renouncing the uniformity and indifference of the several divisions of the currency by discriminating and imposing a choice between them. The discrimination, once it is made or distinctly foreshadowed, will travel to trade at once: gold will be withdrawn and hoarded, silver dollars will become the measure of trade values and the standard for fixed charges and debts. When the

* The notes, it is to be observed, are returned to the Treasury by men whose business is dealing in money, who see and feel the difference between five dollars gold and five overvalued pieces of silver each stamped "One Dollar," who know when it becomes a question of the comparative intrinsic values of the two units, who are never deceived in finance by mere names; men who are in touch with foreign trade and exchange, who, we may note in passing, take charge and account of every effect on the current medium, whether caused by government's action or by mercantile exploitation.

redemption of Treasury notes in silver was imminent on account of the volume of them issued, the fear was lest it would "send gold to a premium," i. e., lead to a silver standard. The situation was relieved by repealing (November 1, 1893) the statutory obligation to buy silver with such notes to a certain minimum every month.

Until the recent Act was passed (March 14, 1900) some remainder of the danger and difficulty existed in the volume of notes already extant, much of which has been redeemed more than once. To maintain the gold standard, or, in other words, to keep the common measure of value sensibly uniform, requires their redemption in gold, and this has been carefully provided for in the Act mentioned. Since the discontinuance, in 1893, of the purchase of silver and issue of Treasury notes, and after the discussions leading to that repeal, it should seem to have become easier to cut loose from the ostensible silver basis of these notes and to recognize the necessity, by the principle of maintaining the current parity of all dollars, for a uniform gold redemption of all government obligations. But the question specially mooted of late about the Treasury notes has been, shall their reissuance be stopped, or shall they no longer be reissued save in exchange for gold? The Act authorizes the Treasury to exchange them for gold or to use them in redeeming or purchasing bonds or for any other lawful purpose, with the exception noted above. So that, like the United States notes, they are virtual gold certificates, although they may not be reissued for deposits of gold as the others may. Since the

United States notes are now classed with the Treasury notes in respect of their redemption, it becomes even more important than before to retire the latter altogether on redeeming them. Now for notes withdrawn and canceled some substitute must be provided in the fiscal operations: government must pay out something else where formerly it paid out the notes. If its revenues and expenses were in such ratio that it could avoid using so much of its credit in meeting expenses, well and good; there is no objection to canceling the notes without substituting other forms of credit money.

If, however, the Treasury is not so well off, which it generally is not, it must disburse other credit currency or subsidiary coin in place of the notes retired. Accordingly, it is provided by sec. 5 of this Act that as fast as silver dollars are coined under provisions of the Acts of July 14, 1890, and June 13, 1898 (their coinage having been suspended in 1893), from bullion purchased under the former Act, an equal amount of Treasury notes shall be retired and canceled and on their cancelation silver certificates shall be issued against the dollars so coined. And by sec. 8 the Treasury Department is authorized to coin any of that bullion into subsidiary (fractional) pieces in denominations to meet the requirements of trade, and under the limitation that the amount of such coin outstanding at any time shall not exceed \$100,000,000;—and whenever any such coins are made an amount of Treasury notes equal to the cost of the bullion contained in them is to be canceled. Now the difference between the effect of retiring the notes against an

equal issue of silver and that which their simple redemption in such coin would have, is that the amount of silver passing into circulation (in coin or by certificate) under the arrangement adopted is definitely limited: the process cannot be repeated with the same notes. And since the purchase of silver for the standard coinage has been stopped, Commerce can calculate its ability to hold the definite quantity already in the Treasury, when it appears in the currency, and the ability of government to hold it up to the gold level, without the prospect, or at least without the certainty, of large additions to the stock.

But neither the cancelation of the notes, as arranged for, nor the emphatic, and, it should seem, superfluous re-enactment of the gold standard in the first section of the late Act, will prevent the natural effect of casting any mass of overvalued but legal-tender dollars on the market. Our security must be found in the limited stock that may be coined. The latest provisions of law reduce the bullion bought under the Act of 1890 to the same relation, and give it the same monetary influence, as that bought under the Act of 1878. Only, through the haggling and suspension and restriction and resumption taking place in the interval, time has been gained in which to dissipate and postpone the effects of those purchases and their coinage.

Both in assimilating the Treasury note to the United States note in point of redemption and in providing for the cancelation of the former against fresh issues of silver coin, Congress practically allows that no special note and redemption fund need be estab-

lished on purchasing silver and coining it, to any extent that commerce will bear, and that the introduction of the Treasury note and the establishment of the gold reserve were only a sort of juggling with the currency to procure a large consumption of silver and still secure the gold standard against it.

On one side, doubtless, the Treasury notes, payable "in coin" and afterwards backed with a minimum reserve in gold, were thrown out as a buttress to the gold standard, retarding and shadowing the flow of silver into the circulation. But while the establishment (1878) of the silver dollar on a partial—or "limping"—standard basis carried a subsidiary coinage to extremes, and while the rapid preparation and admission of silver to the currency was something of a strain on the credit of the government,—the Treasury notes and gold reserve also constituted a menace to the gold standard, in thus recognizing the superiority of the yellow metal and inviting a run on the Treasury after it, especially whenever, in a fiscal emergency, the reserve might have to be drawn upon for current disbursements. If, when the reserve was depleted, the notes had been redeemed in silver, as was once threatened, the silver unit would have become the standard, the silver currency being no longer subordinate under the fiscal policy: just as, while silver dollars were being coined, and before the Treasury notes were given out in lieu of new coin, to redeem United States notes (or certificates of deposit thereof) in such coin would have been to shift the standard.

It is to be observed that the gold reserve is no special backing of the silver dollars or silver certificates. Their

current equality with gold depends on the good faith and general credit of the government, just as before any gold reserve was provided. The only connection between silver and Treasury note, with respect to the currency, was the temporary withholding a part of the former from circulation, made possible through buying it with the latter. In the upshot of the business we find that we have added so much subsidiary and limping-standard silver to our current medium, and have issued such an amount of government notes, which we will pay in gold until it is convenient to substitute silver. And so we reach hard-pan at last.

The only clear use, therefore, of the Treasury note and gold reserve has been to the producers of silver. The scheme was a great concession to that interest in that it served to extenuate and continue the silver-purchase compromise of 1878. Otherwise it was a needless specialization in credit money to the advantage of a certain class or number of creditors.

Yet, the early minting of the bullion, and a consequent swelling of the issue of silver, as if the silver-producers had been paid in their own coin in the first instance, has been inevitable from the start. For the government is hardly in a position to buy and hoard silver permanently without using it,—no more than it is to buy and hold without use a mass of oak, or wheat, or cotton.

CHAPTER XIII.

REPRESENTATIVE CURRENCY OF VALUES IN GENERAL.

Since coin values may, and generally do, circulate completely in their paper representatives, the question is natural, may not other forms of value be circulated as easily in the same manner? This question has been answered affirmatively by some thinkers, including our distinguished philosopher,* Benjamin Franklin. Especially it has been conceived that *land* values might thus serve as money. It was landed money that Franklin advocated. The French tested this theory experimentally in their revolutionary epoch: the paper certificates issued and made legal tender by the first French Republic were styled *assignats*, i. e., assignments (of land). That currency proved to be anything but safe or steady and was soon abandoned as unmanageable. Underlying the theory of land money, two ideas are discernible: (1) the conception of land, a part of the solid earth itself, as the most fundamental substance in economic relations (which it is with reference to geography and biology), seeing that it is the one commercial thing most necessary to life; and (2) that paper money, since

* So-called: but was he not rather *scientist?* His bent, along all the lines of his thinking,—political, social and physical,—was experiment more than deduction or the application of given first principles: or else, like some others who work with the philosophic spirit, he overlooked or undervalued some of the principles involved the most fundamentally.

it may circulate for decades without being once redeemed, can as well as not represent a form of value inconvenient to deliver. The truth is that trade is sensitive on every point of the redemption of the credits it circulates: in circulating them it distinctively contemplates their redemption; for while the rabble ignorantly pass the bills as money, the large traffickers whose transactions are the life of commerce and whose acceptance makes bills of credit function as media of exchange, will not accept these unless they are readily redeemable. So incessantly aware is commerce of the representative character of a paper medium. The test of a successful paper currency is ready redeemability to any extent: the French assignats collapsed because they could not stand this test. Trade, jealous of a tangible foundation to the credits it circulates, frequently tries and proves in practice their convertibility.

This matter of ready convertibility into the commodity represented is *one* important point with reference to the question what commodity shall be money: a *second* is that the money itself, to which paper credits may be converted, is useless until exchanged for goods. Now (1) it is too difficult to arrange a landed money so as to provide for ready redeemability. Can the state maintain for the purpose an indefinitely great reservation of lands of about uniform value? Or may all the land, or all agricultural realty, in the country belong to the state on some socialistic scheme, the holders to be ejected and given a new allotment as government forecloses the *quasi* mortgage on a tract adapted to redeem credits held by some one who wants

land? (2) Supposing this first point met, there must be real estate brokers who will give all kinds of goods, or tickets entitling thereto, in exchange for parcels of land or claims thereon: i. e., the brokers must be associated with firms furnishing all forms of value, personal service included.

In any event, the national banks, and to a certain extent the national treasury, must, on the basis of such money, be converted into real estate offices: the fiscal bureau of government must become a gigantic registry of land claims and title-deeds. The process could doubtless be simplified by placing treasury and bank in direct connection with the houses at which general merchandise and labor were to be bought: but then such merchants or those to whom they sold the paper, would frequently be foreclosing money-mortgages. As the holder of such money-credits, or paper currency, must first exchange the same for land-titles, and then the latter for tickets to general valuables, the currency might as well itself consist of tickets to all forms of value (land included), in other words be redeemable in any sort of commercial value. This would reduce the system to one of *no* money, no form of value being adopted as a standard for other forms.

As to redemption and practical use the difficulty and queerness of a land money are but little less or different from those attaching to a labor money, in the case of which the banks would be formed by syndicates of labor contractors likewise associated with establishments retailing general merchandise (here including land), and the monetary denominations would be time-

work or piece-work in the various employments, as they must be amounts of acreage when land is money. In respect of uniformity and steadiness of value, however, such labor money would be clearly superior to any landed money. But either quickly reduces to an absurdity as seen above, involving the dilemma of a patriarchal and communistic administration of a barter system on the one hand, or an absolutely *fiat* money, which is economic despotism, on the other.

A more feasible, yet still awkward, scheme would be the use of public land as a secondary commercial money, the paper certificates entitling the holder to a number of gold dollars' worth of such land, and the acreage represented depending on the specific value of land in the specified district at the time the bill was presented at a land office. This would connect the general land office with the Treasury and make local land offices into a sort of sub-treasury: under some conditions the public lands might be resorted to as a monetary sinking-fund to reinforce the national treasury.

As to founding a currency on agricultural products, which are not only as heterogeneous as the earth from which they are raised, variable in value from season to season, and for the same season never uniform in quality even within the same locality, but also are easily destructible and rapidly deteriorate,—the government would simply furnish a market for the favored products, standing as a fearless middleman to take off his hands the crops of any farmer who might apply, and issuing therefor certificates designed to

circulate till they reached the dealers in the goods represented.

Such a scheme offers nothing but the greatest inconvenience and uncertainty as regards money, with no advantage save to the favored producer. It is equally applicable to other than agricultural lines of production. Carried out in any way it must involve a great measure of communism. The only such project yet suggested that would have any point under governments of the present order (and the point to this one is against it) is, that government should loan to farmers on security of growing crops, taking the risks of harvest and market, and issuing and forcing in circulation certificates representing the anticipated value of the crops. These would be constituted an intermediate, a merely transitional form of money: for whether government in redeeming them gave metallic money for the bills of sale on the goods, or made certificates to the goods a legal tender,—the goods must finally be sold for regular money, and that before they suffer loss or damage. In the second case the risk, or the loan on such security, is shifted from government to the people receiving the certificates in payment of debts: and in either case the care and storage of the goods must be a public charge.

The cause prompting the suggestion of this scheme (in 1892) was the failure of some farmers to make ends meet. Now, that which would secure a loan from government, or certificates circulated by trade, would be accepted by those who make a business of lending money, while the discount on crop futures at the

national exchequer must be at least as large as at the counters of money-lenders and speculators.

No essential reason appears why such financing would not be as properly based on manufactures or minerals as on farms or their stock and produce. But there is no sense in coining up the surplus or futures of any class of producers that may be impoverished or find an insufficient market. This applies to miners, even those producing metals having in a good degree most of the qualities required in a money metal.

Broader reasons, extra-financial bearings, also render such schemes reactionary and pernicious: these considerations, however, do not concern us closely here, where such financial suggestions would not be mentioned had they not been urged by popular leaders and commanded a large following in a great part of the country. Moreover, they serve to throw a light on the nature and relations of money. The justification for the notice taken of them is implied in the preface to this essay.

CHAPTER XIV.

CURRENCY DEPRECIATIONS—FIAT MONEY—INTERFERENCE OF CURRENT MEDIA—GRESHAM'S LAW.

Having surveyed the different kinds of currency we are prepared to discuss their several depreciations: it must be observed in this discussion that it is depreciation of the *current medium* we are considering; i. e., its cheapening in trade, as shown in the consequent rise of prices, and not necessarily the cheapening of all the basal money. Where parallel moneys have been instituted, and a difference of value afterwards arises between their units, the metal base of one appreciates generally, and the other depreciates relatively to it only, without affecting general prices: for in such a case the unaltered money remains the current measure, as has been heretofore indicated. And one may depreciate generally and be demonetized, the other therefore appreciating relatively to it (and continuing the common measure) without affecting prices, as will appear from example later on. As neither of these effects constitutes a depreciation of *current medium*, they are both outside the scope of the present chapter. Further, the monetary depreciations now before us are such only as are effected by governmental action on the currency. I. A fundamental coinage may be debased in two ways, (*a*) by enlarging the proportion of baser metal in alloying, thus reducing the fineness; (*b*) by making each piece smaller,—with less fine

metal than has been established therefor. The gain to government from reserving, in one or both of these ways, a portion of fine money metal, has induced many debasing recoinages in ancient and modern states, the most important occurring at Athens, Rome, London and Paris. Such debasements have been perpetrated also for the sake of their inevitable effect to raise nominal prices,—a great advantage to governments much indebted to their peoples. II. In the case of parallel monies depreciation may be caused, (a) by instituting a dual standard, to replace a single, at a ratio of weights of fine metal that overvalues the new standard metal in relation to the old, its companion; (b) supposing their parallel coinage to be started at the ratio that produces parity of value in the coins, a subsequent change in the value ratio, or in the coinage ratio of weights, will give the field to the money that thus comes to be overvalued and drives out the other: money will be correspondingly cheaper. In the latter case the result would follow a change in the commercial ratio, which would not be due to governmental action: but no such variation could alter the value of currency unless government had monetized the fluctuating metal as an associate or co-ordinate money. III. Credit money depreciates and expels the basal coin, (a) in consequence of an overissue, where the amount issued passes the extent of the credit the issuer has with commerce; (b) by a weakening of that credit, as through change in government's economic status or in its circumstances as regards stability, the burdens or tasks laid upon it, etc. In the case of an overissue necessitated by extraordinary expenses (e. g. the paper

emitted by the Union government in the American Revolutionary and Civil Wars) the disproportion of the amount issued to the credit behind it may be accounted for partly on the side of each factor (the amount and the credit).

On the credit side the bills emitted by the Continental Congress were weak, not only from the straitened circumstances of that government, but also from the nature of its origin and public status. The paper currency entailed by our Civil War was at the start, and until 1879 remained, irredeemable; i. e., the government would not undertake to redeem in specie its current notes. As these "greenbacks" were issued under exceptional circumstances and in order to tide the government over a critical passage, the point to which they fell was not determined by their number and the initial fact of inconvertibility, but mainly by the bottom to which the national credit sank; the uncertainty and decline of which affected the *bonded* debt as well, raising its interest rates. In reality the irredeemable quality of the greenbacks was conditional,—merely nominal and temporary. It might well be thought if the people's warfare was successful, their government, especially as being that of a democratic republic, would early contrive to make its bills payable. Accordingly, after the prosperous conclusion of the war, government's credit steadily strengthened, and its paper correspondingly appreciated. As the prospect of the resumption of their payment became clearer and nearer, the value of the greenbacks kept advancing: shortly before resumption was enacted they stood at par with money (gold).

Some countries have a paper currency of fixed and permanent inconvertibility. That such is not real, independent money is discernible from the fact that in the settlement of adverse foreign balances such countries must pay in merchandise: that is, the balance will stand to the credit of the creditor nation until it will take more goods. The payment may, indeed, be in paper, the material of the domestic money, as well as in wheat, rice, etc., but such material is received according to a standard and measure that has no part in gauging its value in the form of money within the debtor nation. On the other hand, nations using metal money pay balances always in money metal and according to the same measure (weight) by which the purchasing power of the domestic currency is determined. If paper currency is representative (convertible) then, however depreciated it may be, its value is gauged by the weight of the metal represented that the mind of commerce believes it to stand for. Paper strictly inconvertible is *fiat* money, wholly dependent on the power of government. While wholly artificial, it is independent in the sense of having no relation to another medium or standard. Occupying completely the monetary realm, it measures values by itself, according to the quantity issued. But it is money only so far as the domestic trade of the nation on which it is foisted by the arbitrary authority of a government.

Such a currency is often clamored for by those in pecuniary straits and without comprehension of the nature of money and of its economic relation to themselves. While the demand for fiat money rests generally on the assumption that statutory money need

not have intrinsic value in order to have all purchasing power, still it is desired only as a substitute for intrinsic values, for actual property. Fiat money is no one's first or unconditional choice: its partisans are almost exclusively poor debtors, those who find it hard to get money or to keep it when got, and who mistake the cause of the difficulty. That fiat money cannot satisfactorily replace commercial, or self-valuable, money is shown by the fact that those who ask for the former no longer rate money at so high a price after they get it in the fiat style. In it, even under their usage, the denominations shrink in value. Artificial money cannot be contrived that will equal natural money: it never gyves with the commercial money it displaces. The fiatists themselves prefer the purchasing power of the rich man's money, even after fiat money has driven it from the highways of traffic. In its exile this, the real representative of property, is coveted by all.

With some fiatists the bottom principle appears to be that, intrinsic value being necessary, fiat will create this, will instil into a piece of paper complete commercial purchasing power. Were this so, the will of government could alone limit the wealth of the community, the rich would be the foremost in urging the issue of fiat money, all could be made rich, and a national debt need never be incurred. There is, indeed, a fiat element in token coinage: but it is slight, convenience makes it tolerable, and the enforced debt-paying power of such coin is limited to small sums. Debt-paying power is an attribute of property and of real money: the same may be imparted by government to mere paper, or rather to its sign and superscription on the

paper, simply by virtue of its authority to cancel debt by fiat. This is the only portion of value in fiat; to the extent of this element it has value, purchasing power: for, anything that will pay indebtedness is, so far forth, desirable. This explains why fiat money has any value at all, and why its value is so small in comparison with the self-valuable money whose denominations it assumes.

Anything valuable, no matter what the source of its value, and, therefore, according to what has just been said, fiat money, becomes cheap or loses value in proportion to its abundance. Wherefore it is impossible to maintain the value of any kind of money, fiat included, under a largely swollen issue and circulation thereof;—as impossible as to produce self-existing value by fiat or to increase enormously the production of silver, gold or any other commodity without depreciating the same.* Representative money, as already intimated, sinks as it surpasses the credit of the organ emitting it or as the commodity represented depreciates: credit money measures according to the credit behind it, its measure shrinking as that credit sinks.

The fiatists are more logical, though not more rational, when they take the ground that there can be no such thing as a self-valuable† money: that govern-

* Yet some maintain that a certain sort of money, consisting partly of fiat and partly of a much depreciated substance (silver), could be issued to any extent without falling short of the standard of the initial valuation of its unit,—the size of the unit having been fixed on the basis of a former specific value of the substance.

† This involves the proposition that there is no intrinsic, or self-existent, value in any form of property.

ment is always the creator of money, i. e., of the form of purchasing power held in money, in coin. This doctrine has lately been held forth with much *éclat* in the United States by Mr. W. M. Harvey and others. It is derived from a misconception of the relation of government to money, wherein that relation is regarded as primary, essential and fundamental, whereas it is only and wholly secondary, incidental and subsidiary. Probably the use of paper as credit money, as token and representative of the value held in real money, contributes to mislead the unthinking. For in reading this paper they see that is issued by government equally with coin and that it bears the same denominations: while in handling it they observe that it passes for goods at like rates. They fail, however, to discern that it does so only when truly representative, when thoroughly backed with real (commodity) money.

The rationale of depreciations has been given in the introduction to subsidiary coinage (Chapter XI): for there is an overvaluation of the same principle and force when two coins of values disproportionate to their denominational ratio are placed in circulation together, whether they be of the same or different metal—whether the divergence is caused by making one coin of a less quantity of metal of the same kind as the other, or by making it of a different metal and having it contain a quantity too small to equal in value a piece of the other filling the same denomination. It is unnecessary to an interference of two gold coins (or two silver ones), neither being a token, that they be of the same

denomination: it is enough if their denominations are of the same system and have a different ratio from that between the quantities of metal in the coins, as where denominations are $10:1$, but quantities of contained metal $12:1$; or where the ratios are $2:1$ and $3:2$, respectively. Nor, to produce interference of coinages of two metals is denominational identity of the coins of different species necessary, but only that they all be of the same system and series, i. e., referred to one standard unit of denominations (money of account), bearing the name of that unit or of some fraction or multiple thereof: a disparity between the ratio of the denominations and that of the values of metal contained in coins of different species bearing such denominations, the disparity arising from a depreciation of one species, makes it (the overvalued coinage) supervene in the circulation. The principle and working of depreciated paper also are the same: for credit is of the same financial stuff, the same mercantile essence, as coin, and is measured under the same system. When the credit lying under a piece of paper money is lowered, when faith in the ability or willingness to fulfil the promise is weakened, the worth of such note is diminished in ratio to coin of its denomination (or to a piece of metal that would fill the denomination), and there are two uneven concurrent measures, as in the two former cases.

The withdrawal of the more valuable before the less valuable money was, perhaps, first noticed in the case of inequalities of the first kind, or between coins of one metal. Coins abraded by long service, and so diminished in value, were seen to circulate just as well,

and even more freely and constantly than coins of fresh mintage and full weight: if one wished to hoard money or to hold it for a considerable time, he would keep it in coins of the latter description, lest for his next use the lighter ones should be of less value, according to their weight of metal. A punched piece, indeed, would not continue to pass at its face value: its loss of value being too obtrusively noticeable, and not the slow, imperceptibly gradual effect of doing its office as a medium. Now, the knowledge of the unimpaired status of a coin which had lost value by this latter process would lead to the secret paring and clipping of coins in a way to alter their shape and broad, obtrusive aspect as little as possible; the parings being taken to a goldsmith or back to the mint.*

These natural and fraudulent reductions in the hands of the people would have the same effect—to retire the money of full value and establish a depreciated currency—as an overvalued coinage at the mint. Both causes effected depreciations that fell under the observation of Sir Thomas Gresham,† and which, subjected to his scrutinizing study, yielded the generalization known as Gresham's law, the law, namely, that the poorer of two sections of a body of current money will expel the dearer from circulation.

* The comparative disappearance of this practice is probably not to be attributed to increased virtue in the community so much as to the increased difficulty of doing it both in a method sufficiently cheap and with an effect sufficiently secure from detection.

† The great English merchant and financier of the sixteenth century: he was for a long time negotiator of loans to the British Crown and founded the Royal Exchange.

The determining force in this operation of the poorer money, whether overworn or overvalued coin or discredited paper, is its unimpaired *legal-tender* quality: i. e., a tender of it in payment of debts is as effective to discharge them as a tender of the better money. Some influence, perhaps, may be allowed to the greater abundance (in most cases) of the poorer currency and to its acceptance in cash transactions by those ignorant of the change in value, but that which makes the cheaper expel the dearer medium and prevents the concurrency of two measures of value and two sets of prices, is the state's enforcement of their equality in paying debts, operating as indicated on page 162. A counterpart of the principle lies in the concomitant refusal* of trade to recognize the cheapened legal tender as the par of the more valuable money, or the money of the previous standard. Sellers will have more, denominationally, of the former for the same commodity, in any new transaction: it takes less of any form of value to buy a given number of shillings or dollars in the cheapened currency. That is, the other money is *dearer*.

While government cannot create *purchasing* power (commercial value) in the form of money by direct enactment, it can by enactment create *debt-paying* power; just as it may also enact a pardoning power for crimes. It may reduce or cancel the burden of his debts for the debtor, and diminish or destroy the worth of his credits for the creditor. It can repudiate its

* Which government no longer tries to balk, as it used to do, by statutory regulation of prices.

own* debts and enable its citizens to repudiate theirs. And its ability to enact debt-paying power, or to have debts falsified and discharged in whole or part with empty names, depends on the impossibility of its enacting purchasing power. In money of the new and lowered standard it takes more pieces of a given denomination to buy a given quantity of goods,—one piece or a given number of pieces buys less. As the creditor gets only as many pieces on the lower standard as he would have received on the former higher standard, his credits when turned to money have less value: reversely, the debtor gets more pieces for the same quantity of his products newly marketed, whereby it takes less of those products, or less expense, to pay his debts. Now if enactment had availed to endow the reformed currency with as much purchasing power as the old possessed, the prices would not be raised of the things sold by the debtor to get money to pay his debts with: money, by denominations, would be just as hard to get as before, and so, in the prices of things sold, would confer no additional debt-paying power.

* Government is a great and constant debtor: it is always helped by any kind of monetary depreciation. See below, tax-rates, p. 167 f.

CHAPTER XV.

EFFECTS OF CURRENCY DEPRECIATIONS — GENERAL PRICES — DEBTS — TAXES — GOVERNMENT OBLIGATIONS AND EXPENSES — WAGES — INVESTED AMOUNTS — POOR CREDITORS — ANCIENT AND MODERN CONDITIONS.

A general rise of prices is the primary effect of a cheapened medium of exchange: it depends on the impossibility of evolving purchasing power by legislative enactment. Prices rise just as, and more than, when money becomes cheaper and more abundant owing to a diminished cost of producing the primary money metal, coined without restriction.

These higher prices mislead the unthoughtful to an advocacy of cheaper currency: without thinking of their debts, often without having debts, they fancy a plain advantage will accrue from having higher figures to enter in their sales-books; not reflecting that if they get more, in currency denominations, for their products, they must also pay more for the products of others, which they have to buy. At the same time they lose sight of the fact that money cannot satisfy their wants: that whether cheaper or dearer it is but a special form, or representative, of value, going between other values to expedite their exchange.

But this delusion is supported by a certain weight of authority: some economists argue as if a general rise of prices was necessarily an unmixed benefit to all. I

know a farmer who bought his farm when agricultural property (and other property also) was high, nominally: he has found it impossible to sell save at an apparent loss, owing to the subsequent fall in farms. After reading an essay by Bland, Stewart, Jones, Harvey, Andrews, etc., in favor of silver inflation, this man, if he were inconsiderate enough, would lay the book down, thinking, "That's what's the matter: if money was plentier my farm would be worth more; I could sell it to advantage. Or I could keep it to advantage, as farm produce would rise too. Those fellows in the Reviews must be right: the government can create value so,—give extra value to things." Well, suppose money to be so affected that his farm rose to its old price or higher: would it really be worth any more under the new conditions? Would the money got from its sale or the sale of its produce buy any more than the money that would have been received from selling before under the former standard? For the price of everything has gone up: the purchasing power of one thing towards others has not increased. If selling at the previous price by the old measure means selling at a loss, so also does selling at the present price by the new measure: if the latter represents a gain, so would the former. Nor does it matter if the fall in the price of farms, after our friend bought his, was also a fall in their value,—if they dropped owing to special causes that did not affect other property: it is impossible to recover the loss by a uniform elevation of general prices, such as must ensue from a cheapening of the currency.

If it be said that a rise of prices so caused is *not* general, then, accordingly, legislation thus affecting the currency is class legislation, favoring at the expense of the rest those whose products are advanced. But this is not true. And if it were, the advantage could not become general for the favored class: through competition, indeed, it would quickly vanish for that class as a whole. For such a rise is not due to quickened demand. Circumstances (created in part, it may be, by governmental measures) sometimes afford a wider market or a stronger demand for certain productions, thus raising their prices and furnishing occupation for more producers in those lines. This will normally work a general advantage, by enabling, and requiring, those producers to buy more, in turn raising the prices of other goods; which again affects in like manner still other branches of production,—and so on through the whole circuit of commerce. Throughout its field there is increased production, buying and selling; more wants satisfied; greater and wider prosperity. But a cause that effects a mere advance in rates, without augmenting the amounts and net profits of production, cannot yield a fresh burst of prosperity.

When prices rise in consequence of enlarged production and increased relative supply of the money metal, there is some compensation for shrunken credits in increased sales, owing to the extended buying of the metal producers: then it is not merely an all-around elevation of rates in denominations or money of account; there is more trade. Suppose, however, the metal in question has been coined restrictedly at an overvalua-

tion, to represent coin of another metal as the standard: then, should the former be coined freely and independently, yet still at the overvaluing ratio, the first effect will be a cheapening of the currency before production of the metal can be affected; prices quickly leaping up as such coin falls at once to its own bottom. This, as before indicated (Chapter VIII), will curtail general production and all business: it induces a panic. Any gain by way of increased production of the metal, thus caused, can ensue only afterwards and upon the basis of the new standard. A sudden and sweeping reduction of the value of money according to the cost of this metal, must precede the further gradual fall, accompanied by expansion of trade due to increased output from the mines: which latter is the only effect to allow for with a metal already constituting the standard money.

Nor are loans the easier for a cheapening of the currency. Money is no more plentiful for anybody relatively to the sums required for current expenses: there is no more to spare for investment. When, however, real prosperity is rising, when markets are strengthening, then, whatever the value of the standard unit, many are accumulating surpluses, greater or smaller, over present needs. Savings banks get filled with deposits. It is then that real values are added to the common national stock, and that money, the standard, representative, and mediate value, is in really greater supply: it is drawn from abroad.

The form of value that a currency depreciation can and does really move relatively to other values, is debts, the dead horses of trade. With reference to

other things, while the cost of money is lessened, so also is the amount it will purchase: its purchasing power is altered equally and in the same sense with the variation in the cost of obtaining it. But credits fall with the price of money, because their worth remains the same by denominations, or in nominal price. In reality other values cannot rise, but credits must fall. Each member of the commercial world is helped in so far as his debits exceed his credits.* Debts are reduced, proportionably with the cost of money, because their denominational sum is fixed: the law will not readjust it to the altered currency. Whereby, when money is cheapened and it takes less expense of property to get a given number of pieces of any denomination or a given number of units of any grade, at the same time that number will pay as great an amount of debt as the like nominal sum (and hence a higher value) in the dearer money prevailing when the debt was contracted would have paid. So that the debtor gains. But the creditor loses what the debtor gains, because of the lower purchasing power of the new money in which the debt is paid, or, from the other side, because of the equal and reverse variation in the cost of obtaining it by selling a credit or collecting a debt. Whereas, the nominal cost of obtain-

* As regards this effect it makes no difference whether the change in the value of money results from a cheapening of the basal coin or from injecting beside it a cheaper currency that supplants it by force of its legal-tender quality. It is the latter case when a coinage that has been overvalued and upheld by another metal comes to be executed independently at the same ratio.

ing things with it by its standard is increased proportionably as the cost, reckoned in the same way, of obtaining it with other things than credits is lessened.* The minus value of the debt and the plus value of the credit shrink together and in the same measure. Considering, then, that the transfers involved in a depreciation are confined to domestic commerce, there is neither gain nor loss to the community, provided he to whom value is transferred by canceling part of his debt will use it as wisely as his creditor who loses the like amount.

The only nominal price, then, that remains unchanged when the measure of value (monetary denominations) is depreciated, is the price of a pecuniary obligation, the price fixed in a sale completed, a contract carried out. Such is the effect of legal tender applied to the cheapening money.† Now, making the creditor

* Let us take an example: A bushel of wheat, having risen in price along with other commodities, exchanges for more money,—for instance, a larger number of dimes and half-dimes. Each of the pieces now costs less to obtain with wheat, or costs less wheat, there being more of them to the same quantity of the grain, or fewer kernels to be assigned to each dime or half-dime. But if wheat could remain at the old price (nominal worth), while other commodities advanced, money would, in reality, cost more to obtain with it than formerly, on account of the fall in the general purchasing power of money. See page 89 f.

† Hence the full phrase, “legal tender in payment of debts,” used in the Constitution of the United States. In exercising its power to make something else than gold and silver coin a legal tender in payment of debts, and when it imparts this quality to an anomalous subordinate coinage, as it once did,

accept the new, cheaper currency at the same rate as the old, or else lose the whole credit, is an impairment of the obligation of contracts. That is the reason of the prohibition to the States to make anything but gold and silver coin a legal tender in payment of debts, which prohibition is immediately followed by that of passing *any* law impairing the obligation of contracts. In prohibiting to the Congress the power to pass any such law the Constitution made it impossible for Congress to coin a standard unit that will be sensibly less valuable in the circulation than the existing one, or pass an Act cheapening the money of the nation, lowering the common standard of value, without violating the Constitution. And, let it be repeated, that standard is lowered when a coinage that has been kept at par with a higher standard than its own by its coins being made, in some way, representative of higher intrinsic values in another metal, is reduced to its own base and the names borne by its coins are interpreted with sole reference to the metal they contain. The power of Congress is limited thus in respect of the ways and extent in which it may reform a coinage system it has established, and as to the degree and nature of the alterations it may constitutionally make in "coining money and regulating the value thereof."*

viz: in partially remonetizing silver, February 28, 1878,—Congress adds "except where otherwise expressly stipulated in the contract."

*In this there is no hint that Congress went beyond its authority in reducing the weights of the gold coins in 1834,—gold was a comparative stranger and prices were determined by a lower standard than the former gold unit;—nor in reduc-

Thus by a cheapening of the currency is the obligation of all contracts impaired, unless, when its depreciation is due to changing the metal it is based on and the coinage of one metal remains the same as before, a contract provides specifically for payment in that coin or in its terms. Of course no specification of particular form or class of money will keep such an obligation whole if the basal coinage itself be cheapened and a smaller standard unit of value, without change of name, be provided in that same metal and placed at the base of the entire monetary system.

Since, through cheapened money, a man gains on his debts and loses on his credits, those only realize therefrom a net gain whose balance sheets are adverse, who owe more than is owed them. The farmer before mentioned will gain if his farm is mortgaged: the paying interest on fixed sums is easier. Of taxes it is

ing the weights of the silver coins in 1837,—the reduction was slight and silver was not ruling prices. Nor yet should we conclude that the Legal Tender Act of 1862, which foisted the United States notes upon the country, of itself raised prices much. The rise of prices in that period was chiefly a rise of gold prices,—prices taken in the gold measure were higher; this rise being due to the War itself, operating both more directly and through consequent tariff legislation. There was a mercantile appreciation of the staple products. The change in general prices was not simply a question of the depreciation of the currency below the gold standard. And in general commerce has a certain choice as to its reception and treatment of a bill of credit, which it has not with a piece of gold or silver,—the monies of the world. To a considerable extent its *faith* is its own, as regards the home government and the domestic currency depending on that. See page 149.

otherwise, as the valuation on which they are assessed will soon rise in harmony with the nominal (price) advance of all market values. Heavy mortgagors and others deeply in debt have a direct interest in currency depreciation, which is one method of relieving them. As such relief is not given only at the expense of the creditors of these impoverished persons, but involves *all* creditors, including those to whom the creditors of the impoverished are debtors, the application of this method is not only very inequitable, but, at least under modern conditions, must work much hardship. In effect it is precisely like the ancient method of "*tabulæ rasæ*" and "*tabulæ novæ*" at Rome,—“erased accounts,” “new accounts,” which meant an arbitrary discharge from all debts and forfeiture of all credits, or their reduction on a scale enacted and proclaimed by government. Since the losses caused by this debt reduction bear with various degrees of severity on different classes, entailing the heaviest and most real hardships on those whose comfort and security depend on some small credits, an improvement, in this point, on either of the foregoing methods would be found in the assumption by the state of the troublous debts and mortgages. The charge would thus be distributed amongst all who, directly or indirectly, supply revenue to the Government, falling lightly, perhaps insensibly, on each individual. One objection to such “state aid” would be that the relieved themselves thus contribute to the relief,—which, however, would mitigate the other offense, that it would in a measure make them national paupers. Yet by the method of depreciated money they become paupers to the same extent, only the

charge is not borne generally but imposed on selected victims. So far, then, the weight of argument seems to be in favor of aid dealt out from the general treasury: and remains so even after this further point is made on the other side, that by manipulating the currency the facts of their insolvency and relief at the expense of others is concealed from the poor debtors, mostly unthinking persons, and so their self-respect is not impaired, nor the spirit of self-help weakened in them, as they might be with the other method. But, though the support accruing to distressed debtors from a cheapened currency were a clear public benefit, and whether extraordinary accesses of pecuniary distress would not wisely be left to seek their own remedies or appeal to other than governmental agencies, as the most of such troubles must do,—there are two or three economic evils inevitably resulting from a currency depreciation that more than outweigh all the good it would do the impoverished. These will appear as we proceed.

Government, the state, is always in the debtor class: nobody owes it; it will not loan and will collect its dues: but it is steadily in debt to the holders of its notes and bonds and to its servants, the personnel immediately discharging its various functions. The general fact here stated explains several historic depreciations, which need not be detailed here. Depreciation does not diminish revenue: the same scale of *ad valorem* taxation gives increased nominal sums according to the general rise of prices. Again, such dues are paid in the best coin of the mints: and if the change in the monetary system

has left two monies legally concurrent, as gold with depreciated paper or silver, the imposts are returned in gold on a gold valuation, when government does not lose, or in gold on the valuation of the actual currency, when government gains according to the premium. So with specific duties; and if these are receivable in the cheaper "currency," their rates would properly be advanced in adjustment* to a general rise in prices. In any case the state will not be mulcted at the receipt of custom or of excise. Now then, if it does not lose in receipts, will it gain in point of disbursements? As regards the bonded debt and interest thereon, if the cheapening be of a paper or a co-standard metallic currency, and the debt is expressly guaranteed in coin of the other metal, of course the obligation cannot shrink: otherwise a depreciation involves its shrinkage. As to government's current expenses, it cannot save by making its general *purchases* with a cheaper money, since the cheaper the money the less it will buy. But the salaries of its employees are *fixed* and payable in currency or legal tender. The state shares here the advantage of the full debt-paying power injected by enactment into the currency: for of course a price or rate that is fixed in terms (denominational sum) is affected like a debt. Government would readjust specific imposts, or make any readjustment that would not affect its treasury adversely, long before it would indemnify the great mass of its servants by raising the terms of

*If this is inconvenient, then it should seem that the superiority of specific to *ad valorem* taxation is enhanced by its requirement of, and harmony with, a steady monetary standard and system.

their wages. Here the state participates in the reign of a universal law, the law, namely, that the price of labor is the first price to fall when money appreciates and the last to rise upon its depreciation.*

It is an instance of the economic subjection of labor and of the economic advantage taken at every point by craft and power over weakness and simplicity: the wage-earner is taken unawares. His helplessness here, as at other points, might be more or less remediable through trades-unionism if a depreciated currency were to fall now on one of the more advanced nations: yet there must remain a great mass of unorganized and ignorant toilers to incur this loss. This is a condition precedent for the miseries that have been inflicted on the populace by debasements of their current medium, especially in France, where they used to clamor and riot against the government, demanding money that would buy them bread. The debased coins whose purchasing power had been cut to one-half or less within a few decades were doled out at little or no advance on old rates to those living from hand to mouth, laboring for hire or making wares they at once converted, through the current medium, to the bare necessities of existence; in selling which necessities dealers always sharply discounted the new currency on its first appearance. Such people, even if the nature of the alteration in the currency and the cause of the rise of prices be within their understanding, and though they realize the

*Striking illustration of this law appears in a report on the resumption of specie payment in Chile. This report, addressed to the Secretary of State by Mr. Strobel, then U. S. Minister to Chile, was published in 1896.

effect that will be worked thereby in their economic situation if they go on selling their labor and wares at the old prices, are not in a position to insist on the adjustment of these prices to the changed conditions. On the other hand, those who sell the necessities of life are, by the indispensableness of their goods, so related to the consumer of them as easily to advance their price to keep even with the lessened value of currency denominations. And the large producers in any line, having something to live on while they wait, can enforce such adjustment, if necessary, by holding their goods and stopping production. But the laborer cannot wait, cannot withhold *his* goods, the toil of his hands and the sweat of his brow, without unendurable hardship. Under the ruling spirit of commerce, the unregenerate mercantile spirit, men will take every method that the civil law cannot or does not condemn under penalties, to get inequitable gain out of those with whom they have commercial relations. And so, on the ground of custom maintaining old prices for the labor they buy, employers make "sweat-shops" and slave-fields of their factories and plantations whenever the worth of current money falls. Just as, in any approach to a panic, they make the most of "shortened market" and falling prices (which they are quick to anticipate and overestimate, as excuses for cut-downs of wages more than proportionate, in most cases, to the fall of general prices). A large part of the hardships of the people in the Civil War period, which a recent clamorer for cheaper money has perversely characterized as "good times," arose from the reluctance of wages to rise when the necessities of life were

much advanced in price,—an advance due partly to increased consumption* and lessened production† because of the war, partly to the issue of a cheaper money occasioned by the war.

An issue of such money, under the law of its relation to wages and other prices, gives opportunities to speculate in labor, and in things whose cost is included mainly in labor: for the producer buys low (in wages) and sells high, at advanced prices, and he buys and sells in the same depreciated currency. Another speculative advantage thus offered is in trading,—buying, with borrowed money, before the rise of prices, selling after it and repaying the loan in the new, cheaper currency. A notable example of this was given in ancient Athens under Solon's economic legislation, called the "burden-lightening," in favor of the farmers, who were, almost to a man, heavily mortgaged, because of large losses, sustained in some seasons through competition against which they could not keep up and in others through failure of harvests. These men formed a strong party, importunately clamoring for governmental relief. Solon, who made himself the lawgiver of his country, be-thought him how he might administer the relief without making the mortgagees feel it as at their expense. He decided he could best secure this end by instituting a new coinage, in which each piece should be reduced

*Particularly in textile manufactures.

†Particularly in cotton and cereals. In several lines there were fewer to compete as producers, while demand was strengthened for many products and did not slacken for any,—at least for no staple.

about one-fourth in weight of fine metal, the new pieces, of course, being receivable for debts as equals of the old pieces, since they bore the same well-established names. There were doubtless shrewd financiers who, knowing of this measure before it was enacted or could operate on prices, bestirred themselves to borrow money and buy up lands at the prevailing low price, and, after the rise of prices which ensued, sold or worked their lands at a great profit, paying back in the new coinage the purchase money they had borrowed.

The creditors of these men may have been wealthy and able to bear the loss without inconvenience. But suppose the loans made up from the small savings of the poor, those with a bare pecuniary competence: the loss of the fourth part, or any part, of their invested savings must entail hardship, perhaps indigence, possibly beggary. Now, in the modern world there is a *poor creditor* class, consisting of the great mass of depositors in savings banks and the majority of those holding annuities, policies of life insurance, etc. Out of the aggregate of these little deposits and premiums the banks and insurance companies advance large sums to the great channels of industry and traffic. On the small creditors of such money-brokers, and on small investors in municipal and corporation bonds and the like, the losses inevitable upon a cheapening of money, a lowering of the value-standard by which they are paid interest or principal,—fall with telling severity. In fact, under the modern system of the economic world, the losses thus incurred by the poor creditors will generally overbalance the like gains of

the poor debtors: i. e., the aggregate sum of these credits held by persons who do not owe but whose estates are largely comprised in such claims, exceeds the aggregate sum of the debts of those who have no credits. On the same side, as we have seen, are to be reckoned the losses and hardships of wage-earners. If, as will happen in some cases, the same person gets wages earned by his labor and interest earned by his savings, on neither score is the evil lessened by this circumstance: he suffers a double injury. The interest-bearing principal is a fixed denominational sum, the interest rate is fixed in the note or bond, and the nominal rate of wages is extremely reluctant to rise and balance their virtual fall caused by the cheapening of money. On the whole it seems certain that any depreciation of the debt-paying and wage-paying medium will, in any advanced society, work far more hardship than relief. Nor is it to be disregarded that both the injury in the one case is to somebody's private and unearned enrichment, and the relief in the other comes only with somebody's cheating others of their just returns.

Historians praise Solon for his financial legislation: it was a boon to Attica: it assuaged the miseries of a large class without distressing others. This could be done for the reason that the poor-creditor class did not then exist and the wage-earning section of the industrial community was also undeveloped. The manual labor was done by slaves, savings banks were a refinement of mercantilism as yet unthought of: there were money-lenders, but they were capitalists who loaned only their own property. The modern industrial sys-

tem is altogether a later development: under its conditions thefeat of Solon cannot easily be repeated.

Besides the positive hardships of those reduced to penury or deprived of a part of the income which had only sufficed to maintain them comfortably, we are to reckon the losses of the wealthy investors, even, it may chance, of the holders of national bonds, amongst the wrongs, the fraudulent deprivations, inflicted through every species of currency debasement. While private credit may not necessarily rise when faith is strengthened in the state's financial administration, nor be always and everywhere commensurate therewith, yet it must sink when the public credit falls. This ruin of financial faith and the consequent check and impediment to all the streams of exchange, makes a grave and tenacious distemper afflicting the land in which such repudiations are enacted. Markets for products may not be impaired thereby: they may merely shift promoters and constituents. Credit institutions, however, are discredited, and credit concerns and transactions avoided: a limb of the commercial organism is paralyzed.

CHAPTER XVI.

DEMONETIZATION OF A JOINT STANDARD METAL— THE ILLUSTRATION.

Having considered the kinds and effects of depreciations, let us next take a view of the commercial aspect of demonetization. Calling in a paper currency demonetizes nothing,—not even if it be fiat, for then there's nothing to demonetize, fiat being an immaterial force: while if the paper be representative its discontinuance would mean simply that the money will now appear bodily in the circulation instead of through a representative; the value passing in exchange having formerly been the same as now, and resident in the same substance.

A discontinuance, in any degree, of the use of a metallic currency demonetizes the metal to that extent, and makes its specific value lower than it would otherwise be in proportion to the quantity of the metal thus displaced or prevented from minting, or both. A limitation of legal-tender force involves that the mintage shall not be unlimited in quantity: but where the latter is already restricted it is possible to fix, or to lower, a maximum to which such coin shall be receivable in single payments, without diminishing its use and so without further demonetizing it. Not, however, in every case or to every extent would this be possible: e. g., in the United States at present, where silver dollars are represented by certificates which the govern-

ment keeps paying out in sums of from \$5 to \$500, the maximum must remain high in order that all the silver coined may be used.

The practical problems in this connection arise with reference to demonetizing one of two metals that have both been accorded unlimited legal-tender power, and depend upon a limitation of that power in one of them, or upon enacting or enhancing a restriction of the quantity that may be coined or made the basis of currency, or upon a combination of such occasions. For the sake of the clearer illustration let us put the case of the largest and abruptest alteration: suppose two metals to serve as money concurrently, independently, and unrestrictedly as to both legal tender and extent of coinage; will the complete demonetization of one of them enhance the value of the current medium and lower prices, as a depreciation, or lowering that value, raise prices? There are two intermediate effects through which alone we can conceive this result to ensue, namely, (1) a contraction of the currency and (2) an enhancement of the value of the metal left as its base. The metal demonetized is the cheaper and the one that, at the coinage ratio, inclines to overvaluation. Should the extant coin of a metal partially demonetized remain, after or without recoinage, in the circulation as a part of the subsidiary coinage, there would of course be no immediate effect on the volume of the currency. Nor will there be if such coin is redeemed through the other metal and sold (of course at a loss to the state) to silversmiths; for its redemption means that its place in the currency is supplied. As to the future, the additional supplies to the fundamental coinage are now

drawn from the other metal. Whether or not before the enactment of its monetary supremacy it had been undervalued and driven from circulation, or a competent conspiracy of circumstances had kept the value ratio of the two metals even with their coinage ratio,—now the law referring the value of money to the cost of producing the money metal applies to it alone. The same is true of the factor *efficiency*, and the deficiencies of circulation that may induce temporary discrepancies between the price of money and the cost of its production. A panic arising just after such a change would have its natural effect. But a panic, a general fear for investments, cannot come *out of* such a demonetization, which affects no credit adversely, and threatens no one with shorter or slower profits, except perhaps the producers of the metal whose monetary use is diminished: as to which the following is to be thought.

The demonetization of a metal has an effect to cheapen it in proportion to the quantity thrown upon the market from the currency and to the capacity that commerce had to absorb new money, i. e., to *consume* metal as money, or, rather, in proportion to the part of that capacity that had been occupied by the demonetized metal: which capacity depends on the rate of trade expansion. To that extent, and that only, can the metal's market and worth be affected.

To return to the other metal, made, by the change in question, the sole basal money, and to the circulation and prices which depend upon it. Just as a general failure of commercial confidence (faith in markets) will contract the circulation and lower prices, so, on the other hand, a sensible contraction is impossible if

the industrial community is willing to use money, to invest it in trade, manufacture, transportation. The residual capacity above mentioned does not constitute an insistent or inevitable *demand* for money: from the peculiar nature of money and of monetary consumption of a metal. The volume of trade and the rate of its expansion fluctuate irregularly while the incoming stream of coin and coin securities or bullion securities continues uniform; and *vice versa*, the flow of new money from mint and treasury varies in either sense, while the volume of trade is steady or expanding at a steady rate:—both without affecting general prices. So elastic, both tensile and contractile, is the circulation of money: so much *take-up* it has. This property, though, of resisting price changes, has its limits. Still, beyond those limits the latent influence of the potential rise in the value of money which would otherwise be realized, operates to supply, from the original sources, any deficiency which the means* of promoting the efficiency of the present volume of money would be inadequate to prevent: i. e., the inflow of new money, in the metal left as the standard of value, will be enlarged. This potential rise in its value is what the demand for money consists in, so far as there is a demand: and all the resources and devices will be employed in succession and in natural course to prevent a vacuum in the sphere of the exchange medium.

Here the point will perhaps be made that while the volume of money may thus be kept adequate, its price, together with that of the metal, will advance, because

* Mentioned in Chapter VI.

the freshened demand for money constituted of the chosen metal, creates an enlarged market and demand for that metal. Well, extending a market need not raise the price: it will not if there be no practical limit to production of the article. This condition is fulfilled in sufficient measure in the case of money. The sources, even of gold, have no apparent limit: on the whole their limits are getting more and more remote. If the quantity of metal stored in forms of merchandise should be laid under increased contribution to monetary supply, this, indeed, would argue a rise in the cost of money, a rise that might be permanent, though the amount for circulation were thus for a long time maintained. But before this could happen the sources of the world's supply must fail, and the automatic devices, based on extension of credit operations, for avoiding a trade stoppage or deficiency of circulation. In the event of such failure, and not before, will the larger monetary use of another metal be missed: and even then its partial demonetization in the interval is not to be regretted, but its partial or sufficient remonetization to be effected.

There was a decade of silver demonetization beginning in 1869. Complete demonetization, or rather reduction of silver to a subsidiary coinage, was executed by Germany and by the Scandinavian Union. In 1873 the Latin Union put a restriction to the coinage of its biggest silver piece, (worth 5 francs): in 1878 it stopped altogether the *private* coinage of that piece. In the former year the United States abolished the standard in silver, which until then had formed, nominally, an associate standard with gold; reducing silver

to be only the constituent of a subsidiary coinage, inaugurated in 1853. In the latter year, 1878, and about a year before the resumption of specie payments, a Bill passed providing for silver dollars of full legal-tender power but coined only at the instance of government, in discretionary amounts within fixed limits. These two Acts together, then, had an effect just like that of the silver legislation of the Latin Union, completed about contemporaneously with the American: the effect, namely, of partially demonetizing silver,—causing it, in its standard character, to go *limping*, as the French say. A period of silver depreciation had commenced shortly before the epoch of demonetization, in consequence of greatly increased production from new and rich mines. While demonetization gave a brief added impetus to the decline, this continued from the same cause that started it: cost of production had fallen owing to new sources and processes; and, since demand at the old price was not much augmented, competition had been effectual to lower the price in accordance with the lessened cost. Whence the overvaluation at the established coinage ratios, and wherefore the ensuing demonetization, to prevent currency depreciation.

The advocates of silver remonetization ascribe the depreciation of the metal to its demonetization: some of them argue that the commercial demand for silver is still strong enough to take the entire product, as if this showed that the fall of the metal cannot have had a commercial cause. But they should all see this, that if the demand is in the old ratio to supply, quantitatively expressed, it is on the basis of a new and

lower price: cheapening a thing brings it within reach of more consumers. The increased consumption, relative to civilization and population, presupposes the cheapening as an indispensable condition precedent. So that the question is reduced to this: could the world have put into money and kept at the old price all the extra product (the relative increment of mining output) that has been taken by jewelers, silversmiths and artisans at a much lower price? Was trade suffering so for more medium? Were exchanges prevented for lack of it? The average yearly output since demonetization began has been far in excess of the average annual capacity the arts and trade had in that period to absorb at the former price, supposing the relative monetary use of silver not to have been reduced anywhere, and allowing an increase of the demand for it in both directions, either according to the increased consumption of general products subsequent to demonetization or according to the rate of increase in both kinds of silver consumption prior to demonetization. The rate of production outstrips the rate of absorption possible under the old cost.

Moreover, it would be difficult to show that the whole result of American legislation from 1873 to 1893 was a diminution—even a relative diminution—of the use of silver as money: if, indeed, such was the result and change in the Latin Union. In fact, the action of the United States, instead of furthering, partially offset, the reduction effected in Europe. The American Act of 1873 did not reduce the mintage then going on: instead, it provided an extensive use for silver in the large “trade-dollar,” the coinage of which

exceeded, from its first year, that of the standard silver dollar in any previous year. The Act of 1878 restored the metal to standard coinage and furnished it a consumption far exceeding what it had in both standard and subsidiary coinage at any time before it was formally demonetized. This was continued substantially until 1894. Silver had been effectually demonetized as standard money many years before 1873: almost no silver had been used as such money since 1837. Between 1836 and 1873 there were but two years (1843 and 1846) in which over \$2,000,000 in standard silver coin was issued from the mints. The issue of those two years, as through that period generally, was mostly in half-dollars. The silver kings did not seem to be aware of losing their hold on the money market by the Act of 1873: this only took away that part of the market which had continued in relative disuse even since the opening of the Comstock lode in 1867. Could the suspension or restriction of a market they had resorted to so slightly, have depreciated their product? Their protests first began, or became energetic and insistent, in 1893, when they faced the prospect of losing the large though limited market they had enjoyed for fifteen years at the National Treasury.

To return to gold and the circulation and prices during this period:—Applying the principles stated above,* the place in the circulation that had been occupied by silver as standard money and would have continued to be filled by it as the years went on if it could have kept its old value and remained a standard with-

*Pp. 177-8.

out driving gold out,—we should expect that room to be taken by gold in those countries that diminished the coinage of silver. And such is the fact: the rate of increase of gold money is found to have advanced. Even in the United States, where the coinage of silver has increased instead of diminishing, where the amount of silver money of full legal tender that has been issued every month from 1877 to 1894 far exceeds the largest issue in any year before 1873, the gold money increased much more rapidly after the latter year than it had previously done. The gold mintage of 1873 exceeded that of 1872 by more than two-thirds; that of 1874 exceeded that of 1873 by more than a third; the average issue from 1874 to 1882 did not fall from this high rate, and in 1882 the issue was a good fifth greater than that of 1881. And so it has continued to the present: the increments to the stock of gold in the currency have not fallen off. In the last years they have again much enlarged, in an effort of the *vis medicatrix naturæ* of the economic system to right its condition after the panic of 1893, and in restoration of what went abroad to pay interest: although most of the gold exported is in bars and represents no drain on our general circulation. And yet, though the silver coinage that was required from 1873 on in continuation of former issues has been more than supplied from gold and silver, there are those who assert an increasing deficiency in the circulation since 1873. Nothing had been heard to this effect until after 1893, no intimation that transactions were prevented or hindered by lack of medium. The outcry of poor debtors for money is not to be taken as a demand by

those who have things to sell that are salable and not riding an oversupplied market. If the mortgagees cry, it is for *property*, and not merely a mean for exchanging property. What the mortgagors want is a depreciation which does bring gifts to poor debtors in relation to their debts, but under which, while they buy and sell more denomination dollars, they buy and sell no more property. They allege a contraction to cover a demand for an inflation. The mortgagee would be as well suited with a gift of any other salable as of money.

There is, indeed, one class of property-*owners* who urge a need of a fuller circulation than can be had with "gold alone,"—the owners of the property that would be given a wider market by its free coinage. But if silver were coined freely, at the ratio demanded, gold would be expelled, it would be "silver alone," and the circulation would not be fuller, but only cheaper—the stream would have no more volume, but would be shallower. In urging that free coinage would increase the market for other goods by enlarging the purchases made by silver, it is neglected how limited the market of the currency is for a metal, being merely proportionable to the expansion of domestic trade divided by the rapidity of circulation: so that beyond this narrow limit the output of coin is no additional purchasing force. The stream becomes no greater or more pervasive: you may get more pounds of silver for your wares, but you get no more value. Moreover, if the market for general produce may thus be really enlarged, why not coin freely copper, aluminum and other metals, as well as silver, and

much non-metallic property also, that the benefit may be as great as possible, both on the side of those whose property is labeled as money and of those who sell other property therefor. In urging the need of extended markets the argument of a currency contraction is abandoned. The need of more market means that things are cheap from excess of supply over demand,—natural demand, or quantity of use within the territory accessible to the goods. If, now, an artificial market be created by enlarging the production of something and stamping it as money, there is a merely nominal dearness given to general products owing to the overflow of the money product,—and who is profited? Only the producers of money, and their returns fall off as the money market gets surfeited and their product—coin—cheapens. Presently it comes to pass that they can gain as much or more in some other business. Under free coinage of anything a contraction due to insufficient issues of money is impossible: panic is the cause of contraction (suspension or stringency of business), and contraction is of the circulation rather than of the currency, or quantity of stuff prepared for circulation.

But it is asserted that the metal itself, gold as bullion, has appreciated during the period in question. This must mean either that the cost of producing gold has advanced or that its producers are making increased profits. The latter hypothesis involves a suppression of competition, in effect a gold “trust,” which cannot be, since it must include all, from whatever country, who enter the general markets with consid-

erable quantities of gold money. The former hypothesis implies that the sources throughout the world* generally have begun to fail. But they have not. The diminution from the average Californian output (1849-1874) has been made good from new fields in the Rocky Mountains and Alaska, while the stream of new gold has been swollen from fresh sources in South America, Africa, Asia and islands. Whether or how soon the earth is likely to fail to yield enough of this metal according to its present monetary use and the weights now used as standard units, and according to new requirements of expanding trade, is another question to be considered in its place. (Chapter XXIV.)

Finally, those who raise the cry of scarcity of money to cover the demand for a cheaper money, quote price statistics showing that in most classes of common merchandise there was a marked reduction in the twenty years following 1873. The champions of money as constituted by the portion of value forming the existing unit, reply that this lowering of prices, instead of proving an appreciation of the currency, is explained by the force of new economic inventions, mechanical and other, and by the introduction of quicker, safer and less expensive transportation. Indeed, on the other hypothesis the crowning effect of the economic progress of civilization is denied. This effect has been to eliminate much of the time, labor, cost of storage, risk, etc., involved in producing and marketing most

* The world, it will be remembered, is one gold or silver market; if the supply falls in any country more will be brought into that country to take advantage of its dearness, until equilibrium is restored. See pages 62 f., 206 f.

classes of goods,—the total of which is summed up in *lower cost of production*. Now gold has been less affected in this sense than the fabrics of the mill and the laboratory; less than non-metallic minerals; less than products of farm and forest; less than other metals; less than aluminum or silver.* It is easy, then, to see why all these things have depreciated as towards money. The steady prices that several commodities have maintained, aside from temporary fluctuations, must, unless explained by special causes counteracting the alleged appreciation of the currency, confute those making this allegation, since a change in the value of money must affect the price of everything: accordingly, when confronted with the constant or slightly advanced prices of some agricultural products, they affirm an increased ratio of demand to supply, due to the increment of demand exceeding that of supply. But this would as well offset a lowering of original cost of such goods as an appreciation of money. However, no more, if as much, is to be attributed to heightened demand in these cases than to exemption from influences to lower the cost. Moreover, as to almost every class the ratio has changed in the other sense: supply has outstripped demand; in some instances there has been overproduction. This is to be added to the effect of lowered cost, or reckoned as a result of it accentuating the bearing on prices. In the horse market, for instance,

* This point is developed more fully in a later passage, (page 253-4), where it is more closely germane; here a full statement of it would be too digressive.

this has happened, and at the same time demand has *fallen off* instead of increasing, owing to the recent development and extended application of mechanical and electrical means of conveyance and locomotion. In some cases, too, a freer competition accounts, in part at least, for a fall.

But we may perhaps best leave this matter of general prices, their course and just interpretation, to the trained experts in trade statistics. Tables drawn up by men of the best talent and training in this department, men of the most disinterested views in handling statistical data, who are animated solely by the scientific spirit and in whose hands such figures are least likely to mislead,—plainly show that the classes of commodities kept at a pretty constant price level during the two decades in question and which were found at as high a mark at the end as at the beginning of the period, are too numerous to admit a candid belief that they severally had been held up by special influences affecting each class separately, and too various to support the theory that any one cause or set of causes had singled them out in a special group, leaving all other things untouched.*

When the steady influence of industrial evolution in making goods more easily obtainable, obtainable with less and less exertion and expense of time, and so with less and less of whatever may have constant value, when this influence through the period is fully allowed for, it will be recognized that the issue of

* See an article by Edward Atkinson in the *Forum* for April, 1895, and the authorities there adduced.

money has been copious enough to fill the room created by the rise of new classes and varieties of merchandise, and the contemporary expansion of trade, if not also to resist slightly the economic influences depressing prices.

A more simple and faithful criterion for a rise in the value of money is to be found in the course of the price of labor: did wages fall? is a crucial question, and its answer is as weighty as the deduction from the broadest survey of other prices, however accurately combined and however justly interpreted. When money appreciates, wages, under a law previously adduced, suffer speedy reduction. Those who impeach gold as a sole standard commodity allege that wages were sinking during the years under review, except where artificially kept up by the resistance of labor organizations. This involves an absurdity,—the attainment of despotic power by labor unions, so that they dictate terms to capital, and, in favor of their product, suspend the working of a force (scarcity of money, by hypothesis) otherwise operating universally. Capital is not so weak, especially when backed by natural law in the economic world. If the charge be well founded, strikes have held wages up in the United States well-nigh universally during the interval: a comparison of the rates obtaining in 1872 and 1892 shows that they had risen or at least kept their range in all departments.* In a few instances overpro-

* Is it not so? One may securely appeal to the recollection of the observing reader, or leave the determination to his personal investigation; for which many guides are to be had in recent review articles and in the indexes and reference-books of public libraries.

duction or the competition of foreign (particularly Canadian and Italian labor) induced local and temporary depressions. Protective tariffs cannot be adduced as keeping up the price of labor, or of anything, against a currency appreciation during the period. For in the first place there was no restriction on the immigration of foreign labor: all classes were open to the competition of their fellow-craftsmen in Europe by the migration of the latter. Secondly, the American tariff system was in full operation at the beginning of the period, and, on the whole, was not strengthened in power to segregate the American market and restrict it to domestic products. The strikes were generally unsuccessful and, unless at the very end of the period, when special circumstances induced a deep and universal depression of business, they had mostly the purpose of enforcing an advance instead of opposing a cut-down.

In taking leave of this topic two points further are to be made: (1) the drop in the prices of commodities that occurred *early* in this period was due to the recovery from the effects of the War, and then to the displacement of the depreciated war currency: it was the ascent of the value of money as it became sounder and returned to the specie basis, i. e., to the gold basis which held before the war (standard silver being undervalued and non-current) and which was the real standard all along, greenbacks being at a discount. The elevation of money was the wearing-off of this discount, or of the premium on gold, which the cheap paper had expelled from trade. It was the return of price to the normal rating rather than

its descent therefrom. (2) It is remarkable that an appreciation of money charged to a cause operating at and from the beginning of a period of twenty years, should remain unnoticed until the very end of the period, when a real contraction of the circulation (not of the currency) took place under a panic having particular causes immediately preceding it. This phenomenon has already been met and accounted for in this discussion. It affected prices commercially, shortening the trade supply of money and inducing a mercantile stagnation.

CHAPTER XVII.

BIMETALLIC SYSTEMS.

Occasion has arisen already in this essay to describe in part the joint monetary use of two metals. A more general account of the different bimetallic arrangements, of their modes and incidents, is now in order. The arrangements with one of the metals as subsidiary coin, two varieties of which were considered in a former section, are the most recent, as they depend on a certain advancement in monetary science. Whether the tedious method of weighing the pieces of silver and gold, of such size as it happened, repeating the process in each transaction, was ever practiced when both metals were used as medium, is doubtful. However, the simplest bimetallic arrangement was where each passed independently at its commercial value, by weight. Where the pieces passing as money were scarcely differentiated from bullion, only the weight being authentically stamped on them to avoid the necessity of weighing, when there were no name-units but the names of the weight-units for comparing the quantities and values of metal, no denominations but the names of the weight units with "gold," "silver," or "copper" added or prefixed, as "pound of silver," "*talent* of gold," "silver *drachme*," "copper *as*,"*

* The *talent* and *drachme* were certain weights of gold or silver in ancient Greek monetary arrangements; the *as* was a weight of copper constituting the base of the Roman system.

etc.,—of course in such a system the metals are compared at the ratio of the values of equal weights. Croesus appears to have been the first to organize a regular bimetallic system, with gold and silver. His system was a commercial one, with the gold pieces so proportioned as to exchange,—a certain number against a certain other number,—with the silver pieces struck by the Greek coast cities of Asia Minor. International money consists today of silver and gold substantially on this basis, exchanging for each other according to the existing value ratio: the national names of coins, when coins participate in foreign trade, are wholly insignificant, except so far as international courtesy permits them to vouch for so many grains of refined metal. The earliest arrangement for the joint use of the metals in a domestic currency was a form of this commercial system. But it had a denominational standard in one of the metals, making the system monometallic as regards the standard unit, and bimetallic in circulation, since any amount of each metal could circulate at its own value. Thus in the Middle Ages at Constantinople the gold *byzant* seems to have been the primary unit, with silver an associate commercial money, while the silver *mark* was the standard unit in Germany, the silver *solidus* in some Latin countries, and the silver *pound* in England: with all these three gold formed an allied money. In England a change in the value ratio of equal weights was at once applied to the legal ratio of the mintage, and announced to trade by royal proclamation: it must have been inconvenient making small payments in coins of the readjusted metal, until they

were recoined, and of course there was a loss to the holders of the coin that had depreciated. (The owner of any property naturally loses if its value falls, legal tender being a device that shifts the loss from him who holds money-property at the time of its depreciation to his creditors.) In the times just mentioned government undertook to prescribe money prices of goods by arbitrary enactment: it seems something of a compensation that it did not undertake to fix the relative prices of the money metals as circulating media, and to hold payments to an unalterable legal-tender valuation of silver in gold and *vice versa*. This is the natural system of co-ordinate bimetallism, where one metal forms a standard money and beside it the other stands on its own base, serving as an assistant or collateral medium, measured and measuring by its weight, or by a system of denominations distinct from those of the primary metal while correlated with them.

Where, however, the same primary unit is struck in both metals, in unrestricted quantities of each, and the law regards that denomination, in whatever weight or color, as always identical with itself, and where there is no provision for keeping the coinage ratio equal to the commercial,—we have an artificial arrangement to which by some writers the name “bimetallism” is appropriated; i. e., they give the name by distinction to this variety of bimetallic arrangements, as if bimetallism meant that and nothing else. This system may exist without an explicit declaration of law that a certain quantity of each metal shall be called by the name of the fundamental unit of money of

account; though some writers* restrict still further the use of the term "bimetallism," using it only where a double standard is struck in the wording of the statute. Yet where the standard unit is declared in but one metal, a double standard† is enacted at the ratio adopted, if both metals are accorded unlimited mintage and legal-tender power: unless one species is to be redeemable in the other, which is absurd, since only when a coinage is subordinate and conducted solely with metal bought and owned by government can it be subject to the redemption or backing of a different metal. Whether, then, a standard unit is declared in one or both metals, in the case of the parallel coinages we are considering, a real bi-standard (though it be nominally a single standard) is created in point of law, and a nominal bi-standard‡ in point of fact. For in either case an actual single standard quickly establishes itself, on one of them becoming overvalued at the mint (i. e., when the value ratio changes so that, e. g., a coin of the one by denomination ten times the unit is worth more than ten times a coin of the other of unit denomination) the coin so overvalued will drive its associate from circulation and remains (bye) as the sole trade standard.

The difference, therefore, between Hamilton's and Jefferson's plans for organizing the American coinage

* Those who exalt the force of statute in monetary relations.

† Called by some co-standard. From the standpoint of the metals each is a co-standard with the other: from that of the denomination unit, this is a double standard, or bi-standard, with constituents in each of two metals.

‡ One might fitly write it *bye-standard*.

was but a nominal one: both proposed the essentials of a legal bi-standard at the same ratio and with the same quantities of metal in all the coins, both statesmen fixing the coins on the same scale-system of multiples and sub-multiples of the denomination unit. The effect would have been no different if Hamilton's recommendation,—a declaration of the dollar unit in gold as well as in silver,—had been carried out: the gold dollar, though uncoined, existed in the proportionate weight. In what was written a moment ago, the view was accepted that the clause:—"EAGLES: each to be of the value of ten dollars, or units, and to contain two hundred and forty-seven and four-eighths grains of pure, or two hundred and seventy grains of standard, gold,"* meant to fix the ratio of gold to silver, the standard; and not to name another standard unit in gold: but in enacting that ten dollars in gold should be coined, the unit, dollar, was, to all effects and purposes, established in gold. In the same way coining the half-dollar in silver, independently and not subsidiarily, would fix the weight of the dollar in silver (i. e., the weight of the silver dollar), even had the latter not been coined or declared to be the unit. Whether the standard unit is coined or not depends on convenience as affected by the bulk and weight of the coin.

Nor is it essential that either of the principal metals, forming parallel currencies, should be coined of the standard unit of value, the account-unit: the money

* From the Act establishing a mint and regulating the coins of the United States, approved April 2, 1792.

will be the same if the standard metal be a third, as copper, and the coined denominations be chiefly gold and silver in large multiples of the standard unit. Such a copper unit was actually set up by the general government in the United States shortly before the formation of its present constitution: the denomination of that unit (the half-cent) being overvalued in coining. And so the Act of 1792 might have established a copper unit, a weight of copper, of the value, say, of one one-hundredth of twenty-seven grains of standard gold, and called it *the cent*: the gold and silver coinages would have had the same mutual relations that they did have. Their values would have been determined, as they actually were, by their weight and the specific value of the metals constituting them; while in reckoning they would have been called 100, or 500, or 1000 cents, as the case might be. Under such a system the copper coins of unit denomination or the double of that would conveniently be overvalued and in actual service rank as subsidiary coin.

There are, then, three general modes of combining metals in monetary use, namely: as parallel independent monies on a commercial basis; as principal and subordinate monies; and as parallel monies at a fixed ratio. The last becomes the first if the legal ratio is kept in accord with the commercial: which becomes possible only when all the sources of at least one of the metals are owned and controlled by governments having a common monetary plan;—and *that* is always impossible.

Except on the basis of independent, i. e., commercial, rating there cannot be a practical co-ordinate

bimetallism and bimetallic prices: under a system of coinage at a fixed ratio there is bimetallism in the currency and in price only so long as the values of like denominations in different colors are the same, and then the legislative enactment of their identity is superfluous. A slight discrepancy of the ratios suffices to retire one species, leaving its fellow as sole standard medium and price regulator. (In the United States a discount of less than one per centum on the overvalued coin has had that effect.) The fiat bimetallism then amounts to nothing, save with reference to debts. In the nature of the matter is it fixed that a real and permanent bimetallic system, in the sense of a currency parallelism of the metals, can be had only in the simple, natural and honest form that has to its foundation intrinsic commercial value: where bimetallism means a co-ordination of the metals it means two distinct and independent monies. A double money, *one* based on two co-ordinate elements is impossible: the values of their coins may at times happen to be one, just as a bushel of oats may sometimes just equal in value a half-peck of wheat: but then the two substances are independent. They refuse to be one in trade until they are one in physical composition, by a mixture in which each loses its separate entity. A workable bi-standard may be had by combining gold and silver in a new substance different from either; (*electron*, I believe they call it). Then they become one standard, or, rather, the ingredients of one, more fluctuating than the stabler and less so than the more variable of its constituents. In using this alloy we should cease to regard its components,

just as the copper and zinc are not thought of in using brass. Money would thus surely be one thing, though the determination of its value would be complex. Gold and silver would then be securely harnessed at a fixed ratio. Yet their value ratio would still remain free and independent, and, combined with their ratio in the alloy (money) and their respective ratios to general merchandise, would determine the value of the money. But, because the simple metals would be universally preferable for artistic and commercial uses, to many of which it would be physically impossible to apply the mixture, commerce would never adopt this artificial money: were it enacted by law, an independent gold* money would be kept alongside it by commerce. The money of free, self-conscious trade must be a natural commodity under commercial demand.

If commerce really wants two co-ordinate monies let there be one standard, ordinary money coined, and an assistant money, running, if necessary, in paper representatives of bullion. If the two be put on the coinage system and unit-scale, then, when the denominations and amounts come to have different values in the different colors, there will be two sets of prices,—for the first time real bimetallic prices will be known: a consequence of the establishment of two monies that can be *permanently* co-ordinate. And the two will be differentiated in point of the use trade makes of them. For convenience they should preferably be coined on wholly different unit-scales, the units and denominations being different in the two coinages: so that

* Why gold will be argued later (Chapter XXIV).

instead of "silver dollar" and "gold dollar" we would say "dollar" and "shamrock," for instance, or "pinar," to distinguish the currencies. If such an arrangement would be cumbrous and laborious, it is yet what men should advocate if they want co-ordinate bimetallism and bimetallic prices.

Or, if there must be a second primary money, a second commodity whose owners and producers are to be enabled to circulate it as a medium of trade, and it is desired that this shall circulate on the same unit-scale and denomination-system with the ordinary money, let government stamp it in convenient chunks of different and well correlated weights, and bearing no name but the weight, so that in any state of the ratio the pieces might pass as so many dollars' and cents' worth,—these units being of the standard money. Or if it be too heavy and bulky in proportion to its value (in other words, if its specific value is too small) for convenient bodily circulation, yet (unlike baled hay) is sufficiently compact to admit of inexpensive storage, let government provide storage and custodians and issue to its owners certificates of deposit in the sums, i. e., weights, desired. In either of these ways the substance or its representative would readily circulate with the standard money, however the value of the commodity might fluctuate.

In a sense, indeed, "bimetallic prices" obtain under independent coinage at a fixed ratio: in the sense, namely, that prices alternate, no one may foresee how rapidly, between the two metals as standards. Yet, even in this sense, it is plain that bimetallic prices cannot be

said to "prevail," as there can be but one price standard at a time. It has been shown how, under such an arrangement, the metal that becomes overvalued in coinage drives the other from circulation and rules alone in domestic exchange. Three or four instances can be given from American history, with the "money of the Constitution." When the United States coinage system was inaugurated it was uncertain what the commercial ratio was: the coinage ratio differed between different countries: the commercial varied somewhat between the seaports of the eastern and western Atlantic shores, and even between different parts of the American and European continents, owing to the various costs of transportation from the mines, then a considerable factor. Jefferson's expressions show that he could hardly settle on a ratio commanding his confidence, and would have been more confident in a ratio slightly different from the one adopted. However, he trusted partly to the force of government fiat to make a bimetallic currency on that or any ratio in its vicinity. But fiat would not do: gold, which the ratio adopted (15 to 1) at first slightly overvalued, retired the silver; presently the commercial ratio changed, silver became overvalued and the gold withdrew. Then, in 1834, advantage was taken of this impotence of fiat, in order to restore gold to the circulation and prevent the return of the silver dollar, without expressly legislating silver out of its position as a standard: it was done by taking twelve grains, standard gold, from the eagle, or one and two-tenths grains, standard gold, from the dollar in gold;

which again slightly overvalued the yellow coins.* Thus was the futility of a mere coinage valuation of one metal in another demonstrated at least three times in the same country within fifty years.

Whether, supposing the parallel coinages to be started at the exact commercial ratio, the currency is likely to remain synchronously bimetallic, or in relation to one and the same month or year, one may judge from the first two instances above cited, and others that may be drawn from English monetary history, which show that the slightest discrepancy in the ratios—three or four grains of silver in the balance of a pennyweight of gold—will displace the undervalued coin. The conclusion from those facts is reinforced when they are taken in connection with these following:—That there are two factors, cost of obtaining gold and cost of obtaining silver, a variation in either of which will induce a variation in the commercial ratio: That it has never happened and is not to be expected that when the variations occur in both values at the same time and in the same direction they exactly offset each other, leaving the ratio unchanged: That these costs, or values, are subject to frequent fluctuations, incalculable and imperceptible beforehand, from several causes, including variations of consumption in the arts, i. e., variations in demand at a given cost: That, finally, the metal markets are increasingly sensitive to such effects at the sources of production and in the spheres of consumption, owing

* The eagle was reduced to 258 grains standard and 232 grains fine.

to greater quickness of communication and greater speed and cheapness of transportation, whereby the metal market has become one for all the western world; and that the money market is in quicker sympathy with the metal, from the closer touch of all the stations of trade with the money changers, so that both are more nicely responsive to ups and downs in the metal markets. Accordingly, from these causes as well as from the more rapid and extensive developments in producing the precious metals, the chronological tables of their value ratios show an increasing frequency and extent of variation. This appears quite natural and inevitable, seeing that the ratio is a matter of commercial chance, which gains in variety and complexity of factors.

It is alleged that France maintained a double standard currency for about seventy-five years, ending in 1873, on a ratio ($15\frac{1}{2}$ to 1) which during the most of that period differed from the commercial. This allegation is in support of the contention that law can defy the natural, or value, ratio. Now, it is conceivable that something peculiar in the antecedent conditions of French life and domestic trade, matters of habit and tradition, should have rendered a slight disagreement of the ratios of no effect: or that France was so peculiarly situated in respect of foreign trade as practically to be isolated from the gold market of the world: or even that some special use and demand, Oriental or other, for silver might have been supplied through France and so have kept it dearer to her than to the rest of Latin Christendom. But it is not true that French trade and mintage were insensible to a dis-

crepancy of the ratios. It is allowed, even by those urging the "rehabilitation of silver," that the French coinage of gold nearly ceased altogether about 1823, and again twenty years later: and these were the two occasions within the seventy-five years on which the commercial ratio decisively drew away from that of the French coinage. Both times it became nearly 16:1: * before, between, and after those times it kept close to 15½:1. Soon after the next marked divergence the Latin Union limited the coinage of silver in order to prevent a depreciation of the currency.

Fortunately for business the withdrawal of gold in the two cases cited did not cheapen the currency and alter prices, because the divergence was not due to the depreciation of the coin that became overvalued and remained in circulation, but to the appreciation of the coin that became undervalued and retired. The reverse was true of the parting of the ratios that began late in the '6os.

In the former cases, inasmuch as the appreciation of gold did not continue long nor mount high (according to a fixed habit of that metal), the French currency may not have been wholly deprived of it when its rise was checked. In the United States the independent coinage of silver did not wholly cease during the period of its undervaluation (1858 being the only year in which no silver dollars were struck). But, like the gold in France, that coinage was at a low ebb: the

* See a table of the ratio fluctuations, given in several publications: e. g., Prof. Bastable's article (title "Money") in the Encyc. Brit. (9th ed.)

metal was used for other purposes and was exported, the European continental mints being more favorable to it. Doubtless, also, the gold that continued to be coined in the one country, and the silver in the other, was so treated for convenient use in certain sections of foreign trade. It should be remarked, in passing, that in neither of those instances were the ratios nearly so far apart as they would be now if silver were coined independently at 16 to 1, in which event the over-valued coin would form the new and far cheaper base of the currency.

CHAPTER XVIII.

FOREIGN TRADE AND HOME PRICES—GOLD COUNTRIES AND SILVER COUNTRIES—NEWTON'S RULE.

The commercial regulation of the value of money has a base as wide as the country's whole foreign commerce. A scarcity of money, the formation of an abnormally wide margin between its value in general domestic markets and its cost of production, besides encouraging a flow from native sources to the mint, stimulates importation of the money metal, that is to say, exportation of general merchandise. (Prices being low the country is a good place to buy in.) Reversely, if there is a superfluity of money and the margin in question is shrinking, foreign goods come in to take advantage of the high prices and metal is drawn off to foreign markets where it is dearer, as well as to domestic melting-pots. Thus foreign trade not only maintains, or restores, the monetary equilibrium with other countries, but also helps to maintain at home the price level of money with other commodities and to resist spontaneous coinage inflations. The ships that bring in foreign goods, attracted by high prices, may not bring home the metal for which they are directly exchanged, or in which their price is named :* it depends on whether they come from coun-

* The value against which the cargo is finally balanced, as between the two countries, may consist in part of goods which the nation represented by the ship always buys, or must buy,

tries whose currency is based on that same metal; if not, an exchange will be made, either in the land of high prices or elsewhere, for the other metal; or they may take the metal first received to trade in countries which do base their currency thereon, and where prices are then lower. It is immaterial whether between any two countries the medium be transformed from one color to another: it's a question of the amount of goods of general consumption a given weight of one metal, or its equivalent in the other, exchanges for in the two places respectively; of a disturbance of the level of the relative supply of precious metal and other valuables; of the comparative value of money metal as between the two countries. And of course the metal brought in exchange may be coin, plate or fresh bullion, or any two, or all three: practically it is bullion anyway as between nations.

But, regardless of an equilibrium of the value of the precious metals through the trade-connected world, the mutual trade relations of countries with a gold currency and those with a silver currency are affected in an important manner by that difference. In silver-using countries silver prices are always lower than they are in gold-using countries: in other words the cost of silver in the markets of general merchandise is enhanced because the medium is silver or is based on silver. Likewise gold prices range lower in gold-using countries than, *ceteris paribus*, they do in silver-using

in the other country; this is often the case with certain products of agriculture, as cotton and wheat. The return cargo may be made up of such goods or of goods lately produced to excess and therefore selling low while most products sell high.

countries. The presence of a silver medium, therefore, naturally becomes a barrier to importations from gold countries of goods that are produced there or in other gold countries : the dealers whose producing and buying expenses are in gold cannot afford to sell at the low silver rates and compete with native producers. To make it profitable they must have their selling prices in gold translated into silver at the bullion or world's market ratio, which cannot be done in the markets of a country where an ounce of silver, coined or uncoined, will buy more general produce than its equivalent, by the world's rate, in gold will buy. This trade over-valuation of the home metal varies in different times and countries according to particular conditions. Perhaps it becomes pronounced and effective in a large way only where there is considerable inertia of home prices under a general world-wide depreciation of the metal constituting the currency. That is the case at present with the Central American and West Pacific states, which use a silver measure.

In this way some writers hold that the United States, by having its currency of silver, would monopolize the import trades of Eastern Asia as against gold standard countries ; on the ground that America would then be on a common silver basis with Asia. But it is more than doubtful if American prices would resist the upward pressure if placed in silver on any other footing than the bullion ratio : American markets are so fully in the tide of the world's traffic and so keenly alive to the world's (i. e., the London) valuation of commercial media. The American markets, unlike the Chinese and

the Mexican, cannot be sensibly segregated from the British circle.

A striking illustration of the principle now before us was given by the state of the Flemish trade with England about 1340, to meet the exigencies of which the English at the suggestion of their King instituted in 1343 the coinage of a gold florin (struck in two-florin pieces). The Flemings, of course, sold their wares at prices stated in their gold money (florins): the English money was of silver: hence in paying their bills to Flanders English merchants must translate the gold florin into their own silver coin at the commercial ratio, at its bullion price in Flanders. This made their Flemish purchases cost them dear; for in England the prices of common goods ruled low in comparison with the price of gold. In other words a given article might be got at home for silver cheaper than it could be had abroad for gold: English traders had to resell Flemish wares at a loss. As Edward III. put it, "by paying gold florins with silver coins our merchants continually lose; let us, therefore, enable them to pay with gold ones."* Such a burden on imports was unwelcome to England at that time, at least in respect of trade with Flanders. To-day in Mexico, where a similar state of things obtains, it is considered an advantage, having the effect of a protective tariff.†

* Similarly the United States in 1873 began to strike a special silver dollar to take advantage of the low silver prices in Mexico, etc.

† See an article by M. Romero, then Mexican Minister at Washington, in the *North American Review* for June, 1895.

Another advantage, or a countervailing advantage, as the case may be, is that thus exports to gold countries are stimulated, which find in lands where trade overvalues silver a good market for the white metal they produce or come by in trade elsewhere. To reverse the standpoint, producers in your silver country can sell advantageously at quite low prices in gold markets, for when the silver bullion equivalent to the gold price is coined at home it has an enlarged purchasing power. On the whole, the considerations adduced in the last three paragraphs seem to suggest mutual advantage in diversity of coinage systems, or in the division of the world into gold-using and silver-using countries.

Quite a different case from either of the kinds just examined appears when a currency system that has been based on one metal is placed on a double base by the addition of a second metal as a co-standard and at a ratio that overvalues it in relation to the original standard. The currency itself fails to become double and to conform to the system arranged for it. Under the natural law governing in all cases of different values of units of the same name, the cheaper becomes the sole standard in circulation. There is then a cheapening of the current unit and medium. Silver, or the currency, becomes dear in the land only so far as prices lag in coming up to the mark answering to that they bore by the former standard. But that would be for the most part only in lines where a depression was imminent under the old *régime*: in general, trading prices come instantly up to the mark,

even where the element of labor becomes less costly through the reluctance of wages to rise. While wages and perhaps a few other valuables are getting readjusted, to the extent of that influence foreign silver is attracted. We must add to this whatever *trade* overvaluation may accrue from the country's coming to the silver base: we are to remember, however, that we are speaking of a country in the full swing of modern commerce.

Accordingly, little resistance can be offered to the rise of prices from the general bullion appreciation of the metal of the new currency. For a nation freshly to adopt a silver currency whether by express enactment or by its overvaluation in a bi-standard system is to elevate or strengthen the market price of that metal. But this tendency would soon be checked: suppose there is no surplus at the existing price, still all the world's sources will be stimulated to greater production. And since the new demand must speedily fall off after the change of color has been completed in the circulation, a fresh surplus would come to market; to bring back the ratio to or near, perhaps below, its former mark.

England, indeed, about 200 years ago, in recoining to correct an overvaluation of silver, overvalued gold: but then the mint made an allowance too large for the *debasement* which the silver *coin* had suffered, and there was no *depreciation of silver*, or not enough, to balance the excess. To coin silver now at an even ratio with gold it would be necessary to allow for all the cheapening the former has lately experienced. For the

United States to coin at the old rate would allow for nothing but the very slight part the partial demonetization of silver in this country has had in its depreciation,—and that not in causing, but in failing to withstand, the fall. Might not the fresh supplies quickly overbalance this, and more? Finally, we are to bear in mind that the rise in prices in such cases is not to be attributed to an increase in the real *volume* of currency circulating: the nominal volume will of course be swollen, and if the cost of the light metal falls below its price in trade as settled in the readjustment, the numbers in commercial account-books will be inflated still further, corresponding to a further cheapening of the unit and consequent further rise of prices. But there is no more *value* circulating as medium until the volume of trade increases: for as fast as new silver enters the circulation old gold quits it and goes to gold countries. This effect is even more decided than the importation of silver; for the latter metal now stands on its natural market value and its price as money is higher only so far and so long as special trade conditions favor it, while throughout the entire mercantile field, beginning with the payment of debts, gold is arbitrarily depressed to the extent of its undervaluation.

Both these effects, the inflow of silver and the outflow of gold, are but phenomena occurring under the reign of the law,—a law as universal and enduring as that of gravitation,—that things will go where they are worth the most of other things. This law also, in its particular application to money, is Newton's,

who first thought it out and formulated it. He was led to state it in connection with an example of its operation, resulting under the following circumstances: In the reign of William III., under the famous debasement of silver coin in England, the effects of which are so well described by Macaulay in his history, the gold all left the country. It was thought by recoinage at a new rate to correct the discrepancy and keep gold in circulation. Sir Isaac Newton, as Warden of the Mint, managed the recoinage: his task, in which he was greatly assisted by his thorough knowledge of chemistry and mathematics, was performed with rare insight and fidelity. Yet, notwithstanding his breadth of view, he overshot the mark: silver was undervalued and began to leave for the continent. Then he set to rectify this by reducing the amount in silver answering to a gold guinea. In the *Third Representation*, made by him as Master of the Mint (to which office he was promoted in the course of this business), he writes as follows: "The demand for exportation arises from the higher price of silver [coin in general trade] in other places than in England in proportion to gold, * * * and may therefore be diminished by lowering the value of gold in proportion to silver. If gold in England, or silver in East India, could be brought down so low as to bear the same proportion to one another in both places, there would be here no greater demand for silver than for gold to be exported to India. And if gold were lowered only so as to have the same proportion to the silver money in England which it hath to silver in the rest of Europe, there would be no *temptation to export silver rather than gold to any other part of*

*Europe.”** It is worth pointing out that the difference here spoken of, of the comparative values of the metals in different places, is not a difference in their value ratio as bullion, but as coin, or in general domestic exchange: the word *coin* or *money* might have been added after the words *silver* and *gold*, uniformly through the passage quoted, as the word *money* was in one place; from this, however, the italicized portion is to be excepted. Nor did this commercial unconformity of the proportional values develop out of the diversity of economic and mercantile conditions of the different places: it was determined in the coinages.

The international relations of money and the inter-relations of the metals when treated as joint standards, will be considered further in the following and concluding chapters of this study.

* The author of those sentences must have been a genuine thinker, a careful and wide-seeing student. He first saw clearly the application of intermetallic ratios, and of the different proportional values of the two metals in different countries. He is the philosopher to Gresham's science, and the only philosopher in money since Aristotle, unless we may add Copernicus or Mill to the class.

COIN, CURRENCY AND COMMERCE

PART III

CHAPTERS XIX-XXV

**AS AMONG THE NATIONS AND AS BETWEEN THE
METALS—COINAGE SYSTEMS AND THEIR
GEOGRAPHICAL EXTENT—THE PROB-
LEM OF THE STANDARD**

CHAPTER XIX.

COINAGE SYSTEMS—INTERNATIONAL MONEY AND INTERNATIONAL CURRENCY.

The value of a coin depends on the quantity of fine metal it contains, and the specific value of the metal; this quantity, again, is determined by the degree of fineness and the gross weight of the coin. The quantity in the standard unit differs in different countries that use the same metal as standard money: and the scale factors, or coefficients, by which the denominations, or pieces of circulation, are derived from the unit and related to one another, also differ. Coinage systems generally combine two or more scales: they are now commonly arranged on the decimal as the fundamental scale. The British system, however, is based partly on the duodecimal scale, where the factor of division and multiplication is 12 or a factor thereof (4 and 3). The ancient Roman system employed these factors: the Greeks reckoned by them and also by sixths. Again, all systems are more or less *binary*, i. e., use the factor 2: combining this number with the others as divisor or multiplier one obtains 20, 5, 25, $2\frac{1}{2}$, etc., as additional denominators of the fractions that denominations are of one another. Besides the *unit* denominations, the primary unit and those multiples and sub-multiples of the primary unit that have special names, as dime, franc, pfennig, shilling, crown, kopeck, dollar, etc., there are others, consisting of these names and a

numerical prefix, as half crown, quarter dollar, five francs, half eagle, quarter eagle, two dollars, etc., some of which are not coined, but circulate by means of tokens or vouchers on paper. In any system all the denominations, however numerous and various, are well correlated and easily reducible to the terms of money of account, i. e., to the two (dollars and cents, francs and centimes) or three (£, s, d) names that are used in reckoning and book-keeping. But, because the systems of the nations were formed at different times, under different conditions and on bases independently chosen, they are unconformable, and values expressed in one system are not reducible to another by such simple multipliers and divisors: except where they are brought into agreement, or, as in the case of the Latin Union, to practical identity by a positive convention. There are many who urge the utility of a common coinage system for all nations, with equivalent terms for their several monies of account, and, of course, more or less equality among their pieces of circulation. Several schemes have been suggested for assimilating the coinages of two or more nations, so that their denominations would be compared by integral coefficients. Mr. Bagehot, for instance, has proposed, in *The Economist*, a scheme for assimilating the British and American systems: and it has been pointed out that with slight changes in the individual coins, the *sovereign* (English), *25-francs* (French), *20-marks* (German), *half-eagle* (United States) and *5-yen* (Japanese), could be made equivalents of one another. Austria already coins 4 gulden and 8 gulden (equal, respectively, to 10 and 20 francs): and of course the

systems of the other members of the Latin Union would harmonize wherever the French did. The force of the argument for such changes, based on economy and convenience, is diminished in view of these facts:—that international money, as it is mostly transferred, has already a single measure-system, that of weight; so that unifying the systems of weights and measures would remove any diversity, purely international, in measuring exchange media:—and that travelers in going to a foreign land leave behind their native system and hold altogether to that of the country where they stop; the change being effected for them through the letters of credit they buy from home on foreign banking houses. These assimilations would make it easier to acquire the art of transferring accounts from the system of one country to that of another, would save in the time occupied in such accounting, and might prevent some little loss at the money-changers' in the cases where coin of one realm is actually swapped for that of another. Moreover (and here we hit a more important matter), the expense would be avoided of minting over the coin thus received from abroad. On the other hand, it should be observed that to urge the importance of such conformability is to confess the force of slight variations and remainders in comparing coined values,—a force, it is well to note in passing, of great moment in any system comprehending two independent elements. This very weight and pressure of irreducible remainders is the great argument against the inauguration of a system that would abolish them; as will appear from the following illustration:

In 1868 it was suggested to the special British Commission then considering the matter, to make the *sovereign* equivalent to 25 *francs*, from which sum in French it differed by containing about a grain more. It was urged that if this small quantity were deducted as seignorage from the bullion brought to the British Mint, the change would not affect prices. Such a plan would work so far as domestic trade is concerned *directly*, because each piece *costs* its producer from the mint just as much as before: he has given up just as much when he passes it,—the fact that a small portion, formerly passing to its purchaser, was left behind at the mint not being material. Therefore, as no one will offer more of the new coinage for a piece of goods, prices cannot rise. But there is a reflex influence from the foreign trade: the foreign merchant must have more of the new coin, say, by one-fifth of a piece, for the same goods; e. g., 400 of the old pieces produced 200*l* of the foreign pieces when recoined, and now, as they exchange at just 1 to 5, it takes 400 $\frac{1}{5}$ to yield 200*l*. Hence the importer must pay more of the new coins in purchasing abroad, and consequently must get more in selling at home. Thus indirectly home prices would be raised. The view of Mr. Newmarch in the case just stated would, then, be correct: he argued, and persuaded the Commission, that all contracts would have to be altered to allow for the depreciation caused by the proposed deduction in coining.

This effect would be prevented only if the cost, to the trader, of recoining the pieces that before paid the foreign prices just compensated the extra pieces or grains that would be wanting to the new coin to bal-

ance those prices : whereby 100 new pieces, passing in the foreign country without recoinage, would be just equal to 100 of the old ones minus the cost of recoining them.

Another way to provide coined equivalents to foreign units or pieces of circulation is to establish special coinages for the purpose: as the United States about thirty years ago struck a *trade-dollar* of the intrinsic value of the Mexican dollar ; and Austria, while still holding a currency of inconvertible paper, struck the 8 and 4 gulden pieces already mentioned, in adaptation to the system of her neighbors of the Latin Union. Such special monies, when desired for foreign purchases, may be bought with the ordinary home currency ; the exchange of monies is made at home instead of at the foreign port. Importers get such pieces coined and exchange them amongst themselves. If coin minted thus subsidiarily for external trade were made full legal tender at home, and could Gresham's law successfully be defied, there would ensue two sets of domestic prices,*—a confusing and bungling state of affairs.

To execute some of the projects of harmonization, like that proposed to the British Commission in 1868, only requires action by a single government on its own coinage system. To carry out others would require harmonious action by all the states concerned, but would not meddle with existing standards. The establishment of a monetary union, however, with a com-

*The two currencies being legal-tender by identical terms, denominations.

mon coinage system calls for an international convention and involves the resettlement of the monetary standard. This last point carries the reason why "a common coinage" and "international harmony" are advocated so warmly by those who agitate for the "rehabilitation" of silver. They see that in forming such a union the question of the proper standard for its foundation must be the great question; that no so fair promise to strengthen silver permanently offers in the unassisted action of any one state: and it is their trust that no standard but a bi-standard, no system but a bimetallic one in which gold and silver would have parallel and independent coinage, can be adopted by such a convention. Should not this principle and purpose, more than any feeling for "harmony," or "convenience," or "economy," be held to account for the apostolic zeal of the advocates of international bimetallism and the promoters of monetary conferences to that end?

CHAPTER XX.

AN INTERNATIONAL COINAGE WITH TWO INDEPENDENT MONIES.

The advocates of an international bimetallic convention are of two classes. (1) Those who maintain that the remonetization of silver on an independent footing, if undertaken jointly by three or four of the leading commercial states and if the ratio be carefully selected, would keep the two monies at a lasting parity. They appear to think that the expert financiers of the nations can calculate so nicely the effect of this enlargement of the use of silver on its price, can estimate so closely the future rates of gold production and silver production, and their fluctuations, as to trim the coinage to a secure and permanent equality with the value ratio. Attributing, as they do, the depreciation of silver to its recent partial demonetization in several countries, they consistently argue that the restoration to its former status would bring back the old value ratio (16 to 1 or $15\frac{1}{2}$ to 1); while if other causes had (or may have in the near future) any part in cheapening the metal, their influence, it might be urged, would be offset by the increment to the monetary use of silver that would occur from Great Britain's membership of the proposed union, inasmuch as that state did not use silver for primary money during many decades prior to its demonetization. Some profess to believe that a safe ratio could be hit upon even without British co-opera-

tion. Perhaps these, perhaps all the disputants in this first class, would hesitate to affirm that the commercial ratio would always be found at an exact parity with the ratio adopted for coinage. Such a position can be taken up only by those who ascribe to government regulations a force, not simply to render a disparity of no consequence, but to determine absolutely the mercantile ratio. This doctrine may consistently be held by upholders of the theory that government creates the value of money,—that the value, in exchange or the arts, of uncoined bullion is determined commercially, but of coin strictly and solely by the force of law.

This class, then, admit at least the possibility of slight discrepancies, which they maintain could not expel the undervalued coin because to find a dearer market it must go outside the union, and trade with outside places is too small to afford a sufficient outlet. No union, however, is proposed which would include all the important commercial countries of any continent: and it is to be considered that all the members of any such union have commerce, growing year by year, with every region on the globe; their consulates are in every considerable harbor under the sun. The aggregate trade with Eastern and Western Asia, Eastern Europe, Central and South America must give quite an outlet to the metal discounted by the league of Western Europe and North America; unless the cost of transporting it to those places would offset the gain of exchanging it there. This condition might be fulfilled if it were a question of sending silver, on its slight undervaluation, from New York to Hong Kong. But in all probability gold would be the undervalued metal,

and it would not have so far to go: some of the most enterprising South American communities (Brazil and Chile) use a gold standard; and the most comprehensive league that is much discussed or hoped for would find open conduits for gold in the Dutch trade and that of many British colonies, which control their own monetary affairs, to say nothing of Russia, Austria, Scandinavia and Portugal. Moreover, in applying Newton's law to gold, which has so high a specific value, the cost of transportation is scarcely an important factor: silver may be undervalued more than gold with equal risk of its migration. And for silver, if that should get discounted, a market is not far to seek, in Eastern Asia and Central America.

In considering the East we should not neglect what the students of the courses of the precious metals report, viz: that the oriental capacity to absorb money metal is exceptionally and abnormally great, because it is received there in almost any quantity without raising prices; which latter fact is due to a mercantile apathy that lets prices remain as fixed by traditional custom, and to an exorbitant proclivity to ornamentation and display which will consume in such uses enormous quantities of precious metal. Accordingly a drain of such metal to the East has long been observed, and constitutes, for western nations, a third form of consumption,—the other two being the uses as exchange media and in the arts at home.

The demand for use in the arts is a force co-operating with that expressed in Newton's law: it operates on the smallest margin and regardless of distance or separation from other countries or monetary circum-

stances obtaining there. When one metal is undervalued in coinage, i. e., when the *other* comes into the position of standard, determining prices, the former can be sold to consumers for more of the latter than can be realized by handing it about in trade or in paying debts. Though your bimetallic union (with a bi-standard at a fixed ratio) embraced the entire globe, the metal discounted at the mints would at once occupy many branches of service which had been held by the two metals in common, and its consumption in its own special lines would be augmented. Gold coin and the gold otherwise destined for coinage would go to the goldsmiths and goldbeaters: gold watches would be far more common, silver watches would become a marked rarity. Gold would be cheapened by its demonetization: silver would advance for a time and the rise of prices due to its accession to the position of standard would be checked temporarily. Thus, supposing the two coinages launched at a parity, a shifting of the monetary relations of the metals occasioned by a cheapening of one of them might possibly induce such changes in the two ratios of supply and demand as to erase the depreciation, or, by diminishing it and cheapening the other metal, to restore the parity of value at coinage ratio. But this could not be accomplished until the one metal had been displaced and prices raised: for to say that the correction may precede or accompany those effects is to deny that the discrepancy can arise, and to affirm that legislative enactment may, not merely affect, but, if it be comprehensive enough in the territorial sense, determine absolutely the commercial value of one metal in the other. How the chances and

changes of commercial development are to be harnessed and regulated so as to prevent a variation of the ratio it is difficult to understand. And if a disparity of the ratios should, after a few years, be corrected automatically, that means another change in the value of money. Suppose gold then reappeared in the circulation to any extent, how long would it stay? Would there ever be a permanent and reliable settlement? But probably it would not come back, not if the ratio were so unfavorable as that of 16 to 1 : the clear probabilities declared by the development of silver production point to a speedy wiping-out of any rise of silver that might result from enlarging the comparatively unconsuming use of it as money. After the replacement of gold had been effected the stimulus to silver production would not be removed, but the quantity the world's commerce could absorb, additional to that already circulating, must fall off. On the other side, though it is far easier to cheapen a thing than to enhance its cost permanently, would the cheapening of gold in terms of labor be considerable or lasting? As soon as any depreciation was felt some of the sources would be abandoned, curtailing the increments of supply: and is not the demand for gold specially buoyant,—steadyng and retarding its fall, against whatever depressing influence?

This reasoning, of course, would apply as well to the change in monetary status of the metals that would be effected now by coining them, the world over, at the same overvaluation of silver, as e. g. 16 to 1. The world would come to a silver basis. Suppose international action could remove all basis for the opera-

tion of Newton's law: what extraordinary circumstances, now existing or at all foreshadowed, could nullify or suspend Gresham's law in its application to the arts and their use of money metal?

If the considerations here adduced are well founded, there will be no lack of a more favorable retreat for any metal undervalued, however little, even by the whole world in concert.

CHAPTER XXI.

HAPHAZARD BIMETALISM — BLIND THEORIES — THE MATTER OF RATIO.

(2) There are those in whose view the success of bimetallic unions does not depend on trimming the ratio to allow for purely mercantile influences, and who do not hold it essential that the union include all even of the leading commercial nations: they would not be nice about disagreements of the ratios nor heed influences from outside the league. The extremists of this class require no ally for a nation of the first commercial rank to make a success of co-standard bimetallism at any ratio it may adopt, and especially if it adopts that of 16 to 1. This is the lowest degree of monetary theory: but the position is a logical outcome and reduction of the doctrines from which are deduced the arguments of the soberest and most scientific advocates of international co-standard bimetallism as a permanent solution of the chief monetary problems.

The mental disorder which is manifested in various degrees through all grades of bi-standard agitation has two great roots, (*a*) a misconception of the function, and a wanton exaggeration of the force, of law in monetary affairs: (*b*) a superstitious faith that nature has somehow contracted a marriage of gold and silver, a marriage on equal terms according to the most modern principles, and has fixed the proportion for this union at or near 16 to 1: that any precedence accorded

to either, or, at any rate, to gold (the stronger, as having the higher specific value) is a wicked divorcement, and entails grave economic afflictions.

The United States, therefore, it is conceived, could, with or without the assistance of one or more European states, keep gold and silver in parallel circulation, no matter what premium the gold coin might bear over the silver; or, as will more justly express the doctrine, no matter how much gold bullion may be discounted at the mint, no corresponding premium of the gold coin over the silver will appear in trade. This class conceive that there is something in the economic nature of things in general and of these two commodities in particular, which must keep them parallel and even, as media of exchange and therefore as measures of value, unless the law is partial to one of them,—that is to say, provided the coinage of each is “free and independent;” that this occult force, a sort of monetary *vis medicatrix naturae*, will prevent the practical effects of any inequality that experts may be able to point out between the legal and the commercial relations of coins of the two metals. They appear to think that if the law amounts to anything, if the government interprets its own coinage terms, stamped on the coins, consistently, then any two “dollars” must be at one.* Well, some laws prove

*The uniformity of denominations is indeed fundamentally important. At present in the United States and in the Latin Union it is maintained solely by a thorough-going and well grounded faith in the business integrity of government: statute and stamp—fixing a nominal ratio of specific values—have nothing to do with it; or, rather, it is in spite of statute giving a subsidiary coinage unlimited legal-tender quality.

wholly or partially nugatory: government indeed interprets its dollars consistently where it interprets them at all: but there are relations in which it is not allowed to interpret them. Commerce judges and rates coin independently on its own principles: the substance, not the name, is what it looks to. But the co-standard bimetallist refuses to look beyond the name or beneath the stamp. It is so simple and easy a thing, in his eyes, for government to enforce the natural union of gold and silver as parallel monies, and to secure at a fixed ratio, by fiat co-operation with "natural law," their complete harmony and the steady reign of "bimetallic prices." They take a pride in expounding that physical qualities have nothing to do with the measurement of value, which is a non-physical conception and effect: that your two dollars may be put at one as regardlessly of weight or bulk as of color, since money is neither a steelyard nor a yardstick, and no more measures weight or bulk than it measures color. But value *depends* on physical qualities, which therefore have to do with its measurement: the comparative values of any two things are estimated by their quantities, denoted in bulk or weight,—the question being, what quantity of the one is worth a given quantity of the other. Now, a thing that measures must possess the quality which it measures: and if value is the essential requisite of money, this is because it must measure *by virtue* of that quality in itself, a commercial value like that it measures. Every piece of money must be able to stand an inquisition as to its value, which depends on the quantity of matter it contains or represents. The truths that real, self-sup-

ported money must be a valuable commodity and that any piece of circulation measures by the substantial weight it has or represents, not by the name it bears, stand together as theorem and corollary.

To state that pieces of different metals have equal values involves that if either piece were increased or diminished, the equality would vanish: the co-standardists in effect deny this; so closely do they hug the name and the obtrusive superficial stamp, *applied by authority*. When a piece of gold equals in value a piece of silver, the coincidence is not the work of political fiat, the effect of the same name stamped upon them: it is the result of a conformity—accidental or else attained by painstaking research and manipulation—to the commercially established ratio of weight of equal worths. In thinking of value and its measurement we must not neglect its elements: just because it is a non-physical idea, there is no material thing that, even in the hands of political authority, can measure it with a reference to its pure metaphysical nature. And there can be no handy metaphysical measure because nothing metaphysical can be exchanged commercially, or reduced and scaled by mercantile tables. However, advantage is taken of the relationship between the mental and the material: the desires of man are so related to the things he desires that the desires, and the resulting values attached to the things, may be compared and measured through the things themselves, by attending to their *quantity* (to which desire is proportionate) and to its measurement.

The basal assumption of the men who teach that the United States alone could establish a factitious trade

ratio that would replace or supplant the natural commercial one, or could restore the latter to the mark of 16:1 by coining independently at that ratio, differs only in degree of violence and wantonness from the postulates of the men who think the commercial ratio would be brought to that point or near it, and kept there permanently, if an indefinite number of states joined in a monetary union. There is more difference as to what the theories neglect or overlook. What the latter shut their eyes to is discussed in the preceding chapter. The former do not see the reflex action of foreign on domestic prices nor appreciate how quickly its influence must travel through all the channels of home traffic. They hang much on the words *free* and *independent*, not only as between the metals, but also as between the nations. They appear to believe that our independence of England, now of more than a century's standing in political affairs, should embrace every department of commerce and finance: perhaps—such is the force they attribute to statute law—the monetary system is in their view more a political than a commercial affair. At any rate, they would have the affair conducted without looking for European co-operation, or, as they are pleased to put it, without submitting to European dictation, and would have abrogated the present monetary relationships with Europe. Now, as has been said, law cannot dictate values to commerce: as idle is it to declare a monetary and commercial independence of Europe, or to decree a separation of monetary from commercial affairs. And so long as trade with Europe continues, so long will it be impossible to exempt the purchasing power

of an independent coin here from the influence of European trade. That could be done only by enforcing an interdict of such trade. Some deceive themselves in looking at the fact that the total of all amounts passing in our domestic trade exceeds that of the trade with Europe: no matter; this proportion does not destroy the connection and mutual influence of home and foreign commerce. The European traffic might be much smaller and still afford an outlet for all our gold if it were undervalued, and an inlet to Europe's silver until the former gold prices had received complete readjustment to the silver basis. Neither metal could long be kept, in domestic exchange, sensibly above or below the world's level. The closest index of that level is in Lombard street of London.

The general rise of prices, in case the United States were to coin the metals independently at 16 to 1 or at any ratio undervaluing the present gold-standard dollar in comparison with the silver one, would start at Boston, New York and other marts of importation. The importer must pay as much gold as before to the trans-Atlantic consignor. As soon as his individual stock of gold on hand is exhausted, he must pay in silver, or, what is the same, buy gold with silver. Anybody having gold will not sell it for less here than it will buy abroad. *Vice versa*, the gold will be traded, in the metal markets, for silver to pay debts: and will leave the money-changers for foreign purchase and investment. The importer, then, having to pay as high in gold, must sell at higher prices in silver, in order to make a profit or even get his money back: his returns, in silver, must overbalance his expense in silver terms.

Then, the retailers of those imports must also get higher prices, and, in succession, *their* customers must likewise make up for increased expenses, as stated in terms of the new money: the "corner grocer" must pay in higher figures and sell in higher, and so with all buyers and sellers all along the line.

These "bimetallists," as they style themselves, apparently believe that the United States can "absorb and use at 16 to 1 all the silver that would remain after the wants of other countries have been supplied, and if that can be done it solves the problem, because so long as this country is prepared to coin silver at the rate of \$1.29 per ounce in gold, every other nation requiring silver must take it at that rate, thus helping to sustain one ratio." Well, it could absorb and use that much or any quantity, even if coined at 16 to 1 or any other ratio overvaluing the metal: but the point is it could not be using gold at the same time; nor use the silver at coinage valuation in pricing anything but debts. Though in paying debts an ounce of silver would make coin worth \$1.29 in gold, otherwise that rate is a fiction and the coinage Act a dead letter. The statement is wholly unwarranted that other nations must take it at that rate and pay 30 grains of gold for 480 grains of silver, unless that is the market rate: nor can the United States take "at that rate" more than what it requires for subsidiary coinage, the government buying the stock at the market rate. This must be true unless the unrestricted coinage at 16 to 1 by the United States alone will cause the market ratio to be as 16 to 1: if the sentence just quoted means to say simply

that, it is queerly constructed, yet, as before, represents wild presumption and savors of doctrinal bravado.

It was demonstrated already in Washington's administration how impotent is any legislative act "regulating" the value of a coin by declaring that it shall be equivalent to a stated number of units in another metal: it all depends on whether such legal valuation coincides with that of the market. The force represented by Newton's rule of the international flow of monies will forever overbear all factitious legislative equalizations of coined values, just as his theory of gravitation must always represent the cosmic force of the physical universe in preference to the rude contrivances whereby cosmic phenomena had formerly been accounted for, and which admitted of stoppages of heavenly bodies in their courses. The only way to impede the working of that law and the exportation of an undervalued metal to where it will exchange in ordinary trade at its commercially determined ratio or at an overvaluation, is by prohibiting under heavy penalties its removal from the country: just as Russia used to prevent her irredeemable paper from altogether supplanting gold coin by sending to Siberian exile any subject caught uttering such coin to a foreigner. (The gold mines in the Ural have been under exclusive state control since 1820.) The arbitrary fixing the price of one metal in the other belongs to an outworn system of public economy: to the time when prices of general commodities and wages were fixed by law, as they were by Diocletian, the Roman emperor, and by the sove-

reigns of the middle ages; when sovereignty carried the right of despotic oppression.

But, then, as to the doctrine that the free and independent coining of the metals by the United States alone and at 16 to 1 will so enhance the value of silver as to bring the commercial rate to that point and prevent gold coin bearing a premium. On what is this assertion grounded? On the assumption that the people of the United States can coin up all the overplus of silver above what the outside world wants for all purposes and will pay for, not at the present rate (some 16 or 18 grains of gold to an ounce of silver), but at the rate of \$1.29 in gold (30 grains) per ounce of silver, and above what the Americans themselves will buy for the arts at that rate,—that they may cast all that coin on their home markets without raising prices; or, if prices be raised, that gold is to be cheapened so as to be worth only 16 of silver to 1 of gold: for by hypothesis they are to be brought to a commercial ratio at that mark. But how is the gold to depreciate? The hypothesis involves that it shall not leave the circulation: accordingly it is to lose none of its monetary use in proportion to its use for all purposes. Dr. Andrews argues this cheapening as a consequence of the recent augmented outputs of gold from the fields: his idea apparently is that an appreciation of one metal and depreciation of the other combined will bring them to even values at 16 to 1. It is strange that this depreciation, springing from the greater abundance already secured through the swollen outputs of ten or fifteen years is to show itself only on the inauguration of the independent coinage of silver, so

as to run parallel with that metal. Naturally it should have appeared already in rising prices in gold-using countries. Which is the opposite of what Dr. Andrews and his school have been claiming zealously. At this point they do not appear to reckon with the influence, in keeping silver depressed, of the partial demonetizations of that metal in Europe, which influence they elsewhere make much of as explaining the depreciation of silver, and which would not be reversed by the sole action of the United States: nor with the greatly augmented rate and lessened expense of silver production, giving quantities year by year, compared with which the silver quota of the increase, at normal prices, in the circulating medium of Europe and America together would be a bagatelle. An unconditional statement, such as these agitators give, naming the exact ratio which is to prevail after their measure is enacted, should represent a most searching and complete examination of all the factors and relations of the problem, and a perfectly accurate allowance for the comparative status of metals in foreign monetary use, and for the relative rates of production and mercantile demand of the precious metals during such time as it is proposed to keep them at the ratio named. For those who take Dr. Arendt's view that the sources of gold are about exhausted, their reckoning should allow with precision for the consequent appreciation of that metal. How is it possible to see so clearly and estimate so accurately all these elements and their relations,—especially those of the future? Can these matters be thus precisely forecast and estimates made fit to command the implicit reliance which so many

appear to place in them? While it is impossible to predict the ratio that will supersede in any contingency, do not the probabilities, allowances being made on all hands, strongly indicate for the situation as affected by the proposed sole action of the United States, a ratio much nearer the present than 16 : 1?

What causes a good deal of the confused thought and error about ratio is the idea, itself a piece of confusion, that the value ratio should naturally be that of the extant weight of the metals, or of the weights produced in the near past: and that under free coinage of both, those ratios must coincide. Now, for the ratio of production to be as 15 to 1 does not make this the value ratio nor necessarily cause that ratio to approach this point. Rather, if the ratio of production should coincide with a present value ratio,—let that be 15 : 1, 8 : 1, or even lower,—it would enlarge the difference in value, the ratio of the cheaper to the dearer substance: for thus the supply of the cheaper in relation to demand would be increased more than that of the dearer.

When the value ratio was 4 to 1 there was much less than four times as great a weight of silver as of gold effectively on the market: in fact, the gold outweighed the silver; it is known to have been at one period the more abundant metal. To make the ratio 1 : 1 the weight of silver extant, other conditions remaining the same, must fall far below that of gold. This is because the intrinsic values of the two substances, compared on a perfect equality of the visible, accessible quantities, are so different. The existing ratio of value, then, is far from representing the ratio of

weights of the total extant quantities of the metals, these totals being always much nearerer identity than the values of equal weights. The value ratio is a composite ratio, being the comparison of the supply of the one relatively to the demand for it with the supply of the other relatively to the demand for that, or, mathematically—

$$\text{Value ratio of equal weights} = \frac{\frac{\text{demand for gold}}{\text{supply of gold}}}{\frac{\text{demand for silver}}{\text{supply of silver}}} .$$

The comparative values depend on all the elements of the demand for each as well as on their supply. Were the ratio of values inversely as the ounces extant (about 12:1), it would imply that if the number of ounces of each metal were the same, the ratio would be as 1 to 1, and that should the ratio of quantities be reversed, that of the specific values would be reversed also: in other words, that the demand for each is the same, and the value of the aggregate extant quantity of each the same; that there is nothing to create a difference in specific value but variation in supply.

CHAPTER XXII.

FOREIGN TRADE OF SILVER-STANDARD COUNTRIES WHEN SILVER FALLS.

The more thoughtful European advocates of the bi-standard, in particular M. Cernuschi, the reputed founder of the school of international bimetallists, perceive that the enactment by the United States of a silver coinage for private account at a ratio anything like 16 : 1, must at once demonetize gold and establish silver monometalism in that country. This, M. Cernuschi says, would prove an immediate advantage to America, and an indirect one to Europe: for that the sharper competition and resulting distress to which it would subject gold-standard Europe must induce the latter to join America in a "bimetallic" convention, in order to escape the drawback. Count von Mirbach shares this view so far as relates to Asiatic trade, which, he says, would be absorbed totally by the United States if it should go over to the silver basis. Therefore, if the Europeans seriously feared lest the United States may coin silver freely at 16 to 1, they should, to avert calamities from themselves, be ready with overtures for a bi-standard convention. The latter nation, on the other hand, must be equally interested in avoiding such a convention, or in Europe's adherence to gold, in order that the advantages of the silver standard may not be lessened by sharing them on equal terms with other countries: certainly they

would vanish utterly if all the world adopted that standard.

But the advantage of "belonging in the silver column" is a good deal overrated: the doctrine is a partisan prejudice of the silver men. The theory depends on the idea that silver prices in silver countries are lower, at least when silver is declining, than would correspond to the gold prices were gold the standard: that things are cheaper and expenses lower in silver countries than in gold countries. We have seen how this principle is said to operate in Mexico,—as a protective tariff on the productions of gold countries which that country also is fitted to raise, or which can be bought from silver countries. Are not the lower Mexican prices, however, largely the effect of extra-monetary conditions,—of the social condition and mode of living of the Mexican producer, and, partly underlying that, of the climate and natural qualities of the country?

A just interpretation of, or inference from, the inertia of prices in silver countries under a decline of silver must take account of the extent of their trade with gold countries, in relation and proportion to their domestic trade and their trade with other silver countries. Where prices are stationary under such conditions,—as at present in Mexico and China,—there is a general independence of foreign supply, at least from gold countries. In other words, the effect set forth on page 234 of this essay, and previously illustrated at page 208, fails for the reason that the cause does not reach those places so as to affect common prices, the prices of necessities. Do those who import to China from gold countries sell anything to the Chinese for

less silver than they did 25 years ago, except those articles which are sold elsewhere for less gold than they were then?

It is claimed further, in behalf of the bi-standard, that not only is the silver country protected from competition, but that thus, in effect, a bounty is placed on her exports, enabling her producers to undersell those who produce by the gold standard, even in the home markets of the latter. That in this way prices are lowered, and returns ruinously cut, in gold countries when an industry is developed in a silver country so as to furnish a surplus for export and enter into competition with that industry in the gold country; or when silver depreciates, inasmuch as prices are not then correspondingly advanced in silver countries and therefore expenses are reduced.

Upon analysis, in view of the law making for international equilibrium of value of money, it is plain that this effect of a "bounty on exports" is restricted to times when a money metal declines and to countries using that metal as the standard, where prices are under restraint through isolation or other causes: in the absence of such restraint it can endure only while supply and value are seeking their levels in the currency; and in general the level is not long disturbed by a fall. What call is there, anyway, for trying to prevent by international legislation, and on behalf of certain nations, the effects of a natural change in the value of a certain metal? And is it clear that the evils of the remedy would not be more sure, sudden and far-reaching than those of the malady? For the remedy proposed is to fix an international bi-standard,

which, even though it should hit the ensuing commercial ratio, must give an upward sweep to prices owing to the immense additional amount of mintage that would quickly follow, thus unsettling business. There is no more reason, however, for admitting the bi-standardist claim of a fall in gold prices as caused thus indirectly, across national boundaries, by the depreciation of silver, than for the claim of such a fall as due directly to the demonetization of silver.

The arguments in support of this claim are drawn mostly from agricultural data; and chiefly from the fall of grain prices. Count von Mirbach said in 1895 that for some years the price of grain had not sufficed to pay the German cost of production. The situation would seem to have been no better in England, where the agricultural depression (which there always means a shortage in wheat returns, either from deficient yield or poor markets) has been marked for a number of years. Wheat acreage and the ratio of production to consumption appear to have been diminishing. Now, the champions of silver attribute the depression of the grain interest in Europe wholly to the lowered cost of production in silver countries (Argentina, Mexico, etc.); and this in turn to the depreciation of silver, which, in their view, if not altogether due to restrictions of silver coinage in gold countries, could at any rate be corrected by an international bi-standard convention. Experts in the grain trade, on the other hand, tell us that the competition so ruinous to the European farmer comes from gold countries (the United States and British America). Improvements in rail and water systems of transportation, and the competition

of these agencies, have so lowered freight rates, and the American grain fields so greatly surpass the European in fertility and ease of cultivation, that it is far from strange if the American cost of production to the European market is less than the European cost. Moreover, most of the wheat product shipped from America is already milled, and its cost, as compared with flour grown and ground in England, represents a further cheapening in the highly developed systems and processes of the American flouring mill, as well as in the methods and machinery of harvesting, and the large scale of operations in both field and mill. The great American *surplus* is what has brought the price down: the fall of price is not limited by the cost of the dearest production when the market can be stocked full by less expensive production. When a surplus comes to light the price at which it will sell rather than be carried over to another season determines the price at which any fresh shipment can be marketed, and cuts the profits of middlemen on stock already put on the market. Crops proportionably scant always bring the price up: the year 1895, with a comparatively shortened yield and advanced price of wheat, witnessed for the ordinary economic cause, and to the error of the monetary explanation, of the previous depression in that industry. As civilization advances, there is no likelihood that with civilization's most staple cereal production can permanently outstrip consumption, though the cost may be reduced by the discovery of new methods, the cultivation of new fields, and the invention of new improvements in the machinery of preparation for and transportation to the markets.

CHAPTER XXIII.

ESSENCE OF THE STANDARD QUESTION—CO-EXISTENT CO-STANDARDS IMPOSSIBLE.

So long as definite portions of two metals are equal in value and one of them is taken as the standard for value measurement, the other also may be so regarded, whether the law says so or not: and if a bushel of grain is worth a standard dollar, it may be taken as a unit of value. So of a dollar's worth of cloth or anything else: just as a copy of the standard unit of length in the Patent Office may be used as well as the original. Likewise, again, an exact equivalent, in another substance, of the brass troy pound weight* used by the Mint would give the same results in weighing. Either of two metallic weights coincident in value may be called the standard unit of value and each is then a co-standard with the other: but the value, the real unit of that which is measured, is one and the same. There can be but one standard at a time in the measurement of anything,—value, time, heat, length, weight, mechanical power, electric voltage. Your bi-standard is possible, is a reality on the same occasion or in the same transaction, only when it means a real single standard. When the coincidence of value is gone, you no longer have a single standard nor a co-standard; no

* This was procured in 1827 by the Minister of the United States at London.

more than you have for length when one of your yardsticks becomes longer than the other. Your two units will not now work as one, and you have indeed a double standard, two standards, which cannot both be used in the same measurement; though one may be used on one occasion and the other on another;—the long one may be applied in buying and the short one in selling, as dishonest dealers do with their measures of length, weight or capacity. It is like a metallic yardstick which contracts and expands with changes in temperature.

Suppose a ship-master goes to a tropical country and buys lumber, measuring it on that occasion with a metallic bar under a temperature of 95° F.; then unloads in January on a wharf in New York in an atmosphere 65° or 70° colder, and sells to box-makers or others, who in using the lumber saw it in short pieces. Let him measure here with the same bar: in the interval it will have shrunken in accordance with what physicists term its co-efficient of expansion; thus he sells more feet of lumber than he bought, and gains thereby. But his customers lose by the change: the measure makes them buy more feet in January than it would in June. The importer, with a measure varying thus, gains through buying in the heat and selling in the cold. Likewise suppose an international bi-standard system to be established at coincidence of coinage and value ratios: after a time silver will be announced as cheaper: instantly *that* standard is shrunken, the unit named in it is no longer at one with that of its fellow, and will not buy as much. Like our skipper's metal bar it is no longer the same measure,

does not carry the same degree of the property it measures. Your silver dollar is now discounted by merchants in comparison with its former worth: it is a short dollar, and a larger amount, by this new standard, is required to balance a given piece of goods. Its holder may protest with the lofty indignation of an archangel militant that it's just as big a dollar as ever, that it bears the same name, and, what is more, the same name with the gold unit, which the trader allows has lost none of its value. But it won't do: though the utterer of this great dollar easily persuades his *creditor* to accept it at par with its former self, as though equal weights of a substance were necessarily equal values, even at different times: here, however, the force of *legal tender* comes in.

One may, in point of form or name, discriminate three sorts of standards: the double standard (*bi-standard*), the joint standard (*co-standard*), and the single standard (*uni-standard*). We see the first where two standard moneys are coined at a fixed ratio divergent from the value ratio: this gives two measures, one of which quickly prevails, and there is a single standard. The second appears (only to disappear presently, giving place to the first) when the coinage ratio is coincident with the commercial, in which case as the values are the same we have in reality a single measure. The third (more durable) arrives when there is one standard substance and a unit derived from it alone,* when the idea of seizing down two metallic

*The actual single standard can be silver even when there is nominally a *single* standard in gold. See the note, page 257.

values and fixing their fluctuating relations in a lasting harmony is given up ; when the futility is perceived of the endeavor to fashion for values a monetary *vise*, out of a name, an image, or a superscription. Under any of these systems we see that there is always a substantial single standard, that value is inevitably *monometric*.

If value is thus, in the nature of things, necessarily monometric like all other properties of things, and if a real plurality of standards for measuring it is a moral and physical impossibility, then is it not wise to embrace the single standard openly, as the more progressive states have lately been doing. Seeing that the chances of the silver and gold standards remaining long in harmony,—of the units in silver and gold staying at *one*,—are so slight as appears from the increasing changeableness of their value ratio and their ever-widening divergence in every economic aspect,—is it not the part of prudence to give up the vain struggle for a co-standard ;—the effort to avoid a lone standard in name by hatching out fanciful dualistic chimeras from the force of political law and in accordance with superstitious ideas of economic relationships, notions formed under rude conditions when the economics of things and of industrial society were but half developed, and that unsymmetrically,—when, indeed, economic laws were more or less inoperative. The wisdom of professing and abiding by a single standard may be urged from the standpoint of the largest public expediency and equity : in another point of view, it is but making a virtue of necessity.

Hamilton and Jefferson alike advocated the commercial as the only right coinage, ratio: the former said, "There is no better rule in any country for the coinage than the commercial proportion;" the latter said, "The ratio of value between gold and silver is a mercantile question altogether." But they regarded this mercantile ratio as something permanent and uniform, and so thought that when it was ascertained the coinage might safely be *fixed* on that basis. They were uncertain what the ratio was, and in fact it differed in different European countries and on the opposite sides of the Atlantic. If those statesmen were here to-day, when the cost of transporting silver to Europe is a much less considerable factor, and its value ratio to gold is all but uniform throughout the entire Atlantic world, when that ratio is quickly ascertainable to the thousandth of the unit of comparison, when it fluctuates more and more rapidly and extensively, and the fluctuations are quickly registered in prices in all countries that use silver and have an extensive trade with gold countries,—is it probable that under these conditions they would undertake to organize a co-standard? Their words show that they desired a double standard only on the understanding that it should be in effect a single standard: but that idea could not be realized save through a happy-go-lucky chance, and how insecure such a coincidence is, if it was ever realized, has been shown many times in the subsequent life of their country.

We have seen that the fathers of our monetary organization did not hit the true ratio closely enough to make their bi-standard safe,—to make it single: that

Isaac Newton, with all his acumen, could not strike it in two trials. To determine what will be the ratio at once, in the circumstance of a given change in the monetary relations of the metals, whether on the part of one great nation or more, depends on questions that no statistics, however manipulated, can adequately answer. And how much darker the problem is when it is proposed to secure permanence, allowing for future commercial changes: how much surer is failure when future developments are defied.

CHAPTER XXIV.

THE BEST STANDARD.

What substance, then, shall be elected the standard money, the material of which our one standard unit is to be made? That commodity, of course, which possesses in the highest degree the qualities required in a standard of value. The chief requisite is steadiness of value. On this account it is better to demonetize that one of two legal standards which threatens by its increasing cheapness to expel the other and establish a cheaper unit, than to monetize such cheaper material, making it a co-standard at a ratio which makes the unit in it of less value than in its fellow, and so leads to the result avoided by the former course. The former course is the one which the nations generally have been following: the latter is the one that a certain party and school of reconstructionists is urging the United States to adopt.

In this point of stability, as well as in that of portability, gold excels silver. The statistical tables of gold and silver production show that the supply of the latter has augmented with far more irregularity than that of the former. In this respect silver has come to have pretty much the status of an ordinary manufacture, and the rate of its production has come largely under the control of man,—i. e., within the power of man to force it. General Butler has argued that this fact about silver mining, its being carried on with machinery and

reduced, as regards labor, to the common industrial basis, makes the metal of steadier value than gold. But it is plain that thus it is subjected to the cheapening influence of mechanical progress: while, in accordance with its smaller specific value by bulk and weight, the cheapening of transportation by the same means affects its cost to produce more than the cost of gold. In proportion to this difference between the metals, gold is less liable to overproduction, i. e., its production is less likely to be stimulated beyond the capacity of the market at a present price, and slackens quicker in response to any fall in market. In other words, the cost of producing gold is less easily forced down. Thus the statistician informs us that "Gold is found in sixteen of the nineteen Departments of Peru, but mining operations are now in general attended with little success. Many gold fields have been abandoned or are worked only by natives." This illustrates the point, and refutes the claim of a recent enhancement of the value of gold: if gold should become worth a little more, or when other fields become less productive, the Peruvian fields will be worked more extensively. General Butler's point that silver is in closer touch with labor seems hardly well taken: it might be so if factory labor were the true type; but the product of the factory is scarcely a representative or measure of brute toil; it represents too large unearned elements. The position of gold is much more conservative: its continued large dependence on unassisted human exertion in searching and in performing the operations of extraction makes it a faithfuler representative of days' work,—the most ultimate and inert

measure of values. So that the very fact of its unique economic status makes its value steadier.

The very fact, again, of the manifold superiority of gold to silver in preciousness, in commercial value, is well-nigh conclusive proof of its superior stability. It is a law, nearly, if not quite, universal, that the higher the specific value of a commodity, the more inert that value is. This is true not only in comparing valuations by a common measure, but also in comparing the percentages that the movements are of the values moved. For example, take two commodities that are compared by weight and let the value of a pound of the one be to that of a pound of the other as 18 to 1 in units of a third valuable thing: then while the second is varying 1% of the common measure, the first will vary not simply less than 18% of it, but probably less than 1%. Suppose wheat is worth \$1 per bushel, and Indian corn one-half the same dollar: wheat is the steadier if it varies less than 10 cents while corn varies 5 cents; but the chances are that wheat will in that time vary less than 5 cents. Or take iron and copper: let copper be worth \$35 per ton and iron of a certain grade \$20; the former is the steadier if it shifts less than \$1.75 in the ton to the latter's change of \$1, but probably copper alters in that period by less than \$1. Are not diamonds, in the long run, of steadier value than gold? Their unfitness for money results from other qualities than stability and portability.

This is one reason why the higher value of gold has recommended it as a standard of value, and assists in explaining the historical evolution of money material as commerce has successively rejected a commodity of

lower for one of higher specific value.* The development of trade between separate states, especially across seas, always brings into use metallic money. The Greeks and Romans began with cattle: early in historic times we find them using copper and baser metals: these, as trade sprang up with over-sea communities, were replaced by silver. Finally gold appeared from Asia, and thenceforth more and more assumed the functions of money, which it discharged at first as a commercial associate of silver. It was in the reign of silver, as the first international money of those states and as the first medium of traffic differentiated as a business, that the monetary functions were first distinctly recognized: for we find that the Greek and Latin words for "money" are the words meaning silver in those languages. The German word for money, *geld*, illustrates the progress of this evolution, leading to gold as the standard of value and the chief money material.

For this position the more valuable commodity is specially recommended by the greater ease and less expense of transporting a given value in it: for the chief money material means not only the standard for money of account in all business, but also the property passed in cashing the largest balances. These take the largest quantities, and generally require their transportation between the most widely distant places, concerned in a nation's home or foreign trade. This is

* In Greece the earliest known coins were of iron: whatever was first in Italy [Etruria] the earliest Roman coinage was of copper.

especially true of international money, and as traffic with alien lands developed we easily see why all states in their formative epochs have turned from copper to silver or from silver to gold.

Gold has not, however, banished copper, much less silver, from the world's mints: even under a gold standard these metals have important uses as alloys and subsidiary coin. In mediaeval and modern times, as well as in antiquity, silver has to some extent shared with gold the functions of primary money, one of them being on a commercial basis. In modern times it has also disputed this sphere at a fixed ratio, and generally with success, as we have seen. Slowly but surely gold is crowding it, not out but down. Silver resigns its share in the standard business with extreme reluctance, and naturally, as it is a specially lucrative business for silver, which can so readily overpower gold in a partnership on fixed terms and assume a monopoly of the monetary field. In discarding co-standards and bi-standards monetary societies have always made their standards of gold. Great Britain in 1816, North Germany in 1869, the Scandinavian Union in 1871, the Latin Union in 1873 and 1878, the United States in 1873 and 1900. Other states, that used the silver standard, have replaced it with gold. The Netherlands, in 1872, and within the last decade Brazil, Chile, Austria-Hungary, British India, Japan and Russia.*

* It was in 1878 that the gold standard was securely established in the Latin Union by stopping the coinage of silver for private depositors. The action of the United States in 1900 has the effect only of a more emphatic and explicit re-enact-

The partisans of a co-standard bimetallism profess an apprehension lest the world's output of gold may prove insufficient to maintain prices if the leading commercial states continue to base their currencies on it alone. They point to abandoned gold fields, and to the fact that the maximum yearly output yet recorded was made many years ago. Grant for a moment that they are right: yet upon evidence that the cost of money was rising or about to rise through failure of gold supply, the circulation could be kept up and the cost of its unit kept down by recoining and reducing carefully the weight of the unit. A recoinage is a little expensive, but would be a trifling burden and inconvenience as compared with cheapening the currency by making it of silver, which would be the sure result of attempting to reinforce gold with silver and inaugurating a bi-standard, at any ratio acceptable to the silver party, and, indeed, ultimately at a present value ratio. If the adjustment referred to should make any gold

ment of the single standard in gold. This country, as well as the Netherlands and the states of the Latin Union, have a *nominal* bi-standard; they give unlimited legal-tender force to certain silver coins, the issue of which is so restricted as to make them really subsidiary. In one state, Russia, while gold is the nominal standard silver is the actual standard, or lately was, as stated in a "note by the United States Treasury" in the *Consular Reports* for September, 1898. This we must attribute to a lack of sufficient restrictions on the issue of silver. The case would be the same in the United States if the restrictions on the coinage of the silver dollar should be removed without formally disenacting the single gold standard. It was not until 1897 that the gold standard was legally enacted in Russia. Likewise, the value of the silver florin of the Netherlands continued to fluctuate until 1880.

coin too small, that denomination, if indispensable, might be replaced with overvalued silver as a token. Already in America that is the form in which the unit circulates, when not in treasury or bank notes. If five dollars at the present level should ever equal too little gold to be coined, that particular coin might be discontinued and the denomination kept circulating in paper, which it is now for the most part.

The alarms, however, about deficiency of gold do not appear well grounded. The world's annual output has for some years been increasing,—as some bi-standardists were allowing even before 1897, when new gold began to appear from the rich deposits of the Klondike. While the Australian output has dwindled, and the Californian fell off for a time, rich mines and fields have been opened in the Rocky Mountains, in South Africa and in Venezuela and Guiana. These are pouring out large streams which are swollen by tributaries from new sources in Alaska, Siberia, Cape Horn. In Mexico large veins are reported which have scarcely begun to be worked: the Ural Mountains continue their yield unabated: the Chilean, Peruvian and Scandinavian mines are not exhausted. Latterly the Californian output has increased: for 1894 it was larger than for any year between that and 1886. In 1871 it had fallen to about one-third more than it was in 1894: after 1871 it rose again; of course there must be ups and downs, especially in the product of individual localities. So far the fresh supplies have proved quite equal to the increased use of the metal due to its enlarged share of the money business. Have not the recent adoptions of gold as

sole basal money followed the discovery of new sources, promising large additions to the world's stock? Mexico may become a gold-using country when her auriferous rocks are worked systematically and she gets more fully into the currents of the world's traffic, thus following the course of her forward cousin, Chile.

The world's visible stock of gold is augmenting much faster than it was fifty years ago: unless it is added to at a still greater rate it may be undesirable, as it appears improbable that all the world shall use a gold standard. Some nations will gain more on a silver basis, with silver depreciating, if, like Mexico, they have an important native production of silver, exceeding in value that of gold, and if they export to gold countries largely for cash, or have gold balances to their credit: while at a steady exchange between gold and silver, and with prices corresponding, there is nothing to lose, as between nations, in paying or getting paid in either metal rather than the other. Still, the most of the world's business is already on a gold basis, the silver countries doing a very small part of it, even in proportion to their area and population.

If it be said that there must be a limit to the store of gold in the earth and so to the potential supply of the world, a sufficient reply is given in the point that this limit applies equally to silver: but so, too, is there a limit to the possible volume of the world's commerce. Moreover, if we are to look so far ahead, we must give some weight to the assurance of geological science that nature renews her deposits of gold in the same

locality.* Another thing,—will the convenient mediation of the world's exchanges always require as great a volume of circulation as at present, in proportion to the volume of commerce? Certainly the making exchanges by transfer of credits, without the physical passing of a definite commodity medium, is the most important development in the mechanism of modern commerce. Is the development yet complete? Beginning as the visibly transferred medium of exchange, money is now more and more restricted to its second function as the measure and standard of value; which function it discharges perfectly without passing in its own substance. And the efficiency of money of circulation, whether primary or secondary,—does it not increase? The more rapidly a piece passes from hand to hand the larger the amount of trade it will mediate.

* See articles on this subject in the *Cosmopolitan* for 1895.

CHAPTER XXV.

A LONE STANDARD WITH BIMETALISM IN THE COINAGE.

Against the menace of falling prices, apprehended in a universal gold standard, there is another resource, outside the golden treasures yet concealed in the earth's crust and the mass accumulated in hoards and plate, which a rise of value would release to the market,—a resource that can be employed without danger of inter-metallic conflict: I mean the collateral use of silver. The use of one metal as commercial money in association with the other as the standard is, as we have seen, well precedented in monetary history. On such a plan an unlimited quantity of silver might circulate at its commercial value according to a gold measure; conveniently through certificates attesting the weight of fine silver to which the holder was entitled. There would need to be made from time to time an authoritative declaration of the worth of silver,—than which could anything in monetary administration be easier?* In making up a sum with such paper a little subsidiary coin must be used to supply odd remainders: this, too, would be as easy as it is to make change under exist-

*The worth of silver is ascertained now once a year or oftener by the Director of the Mint in order to the declaration, required by law, of the value of foreign silver coins as well as the other foreign coins.

ing systems. As the basis of a bimetallic convention some such scheme was proposed by the Danish delegate at the last (1891) monetary conference. The holder of silver titles would thus of course realize a loss when the value of such property fell: but the lessening of property through a fall of market rates is a necessary incident to the holding of property at all. No form of property is exempted from mercantile shrinkage, nor can be by any law: silver, or even gold, as standard money suffers more or less depreciation, and then what saves the owner of money from loss? The loss of the owner of silver arising from its depreciation would be no less real, though it might be less sensible, if silver were the standard money; and in that case prices must be affected more or less. Whereas, under the scheme suggested *no* depreciation of silver could disturb prices.

The gold standard, then, by no means necessarily involves gold monometalism: silver may be used therewithal as money of circulation to any extent desired. Even at a fixed ratio this may be had by keeping silver on a subsidiary basis. With gold the standard, as best fitted for that service by its superior condensation of value in weight and bulk, whereby it is more convenient for the larger and more important exchanges and for the conduct of the great mass of trade,—there is still a large place for silver as a representative of such standard in the smaller and more numerous transactions and in making up odd remainders: for this service, in turn, the white metal is best fitted by its lower specific value, which gives pieces of convenient size in representing the smaller

denominations. Such bimetallism, where the accessory metal is of limited coinage conducted as a state enterprise, so as to make the coin representative of, i. e., redeemable in, the standard money, is the only bimetallism that has ever been found to work permanently. We find it carried into large operation to-day in the United States, not only with the fractional pieces, but also with the dollars, these, or their certificates, being exchangeable at the Treasury with the government's notes, which in turn the holder may at his option convert into gold. This equality, under the declaration of the statute that all dollars should be maintained at a common par, makes the overvalued silver dollar as much a token as the half-dollar, the quarter and the dime, whose redemption is specifically provided for, but rarely demanded. The case is substantially the same in the states of the Latin Union and in the Netherlands; these all limit and overvalue their largest silver coin, while making it full legal tender, as does the United States with its silver dollars. Such "limping standard" money is really token money: everywhere it is used the credit and honesty of government, whether or not under specific legislative enactment, is depended on, with the restriction of its issue, to keep it practically convertible with gold.

This is the only workable bimetallism. General Butler, in arguing the practicability of the co-standard under free coinage of both metals, pointed out that while the ratio of silver to gold in the coinage of Great Britain is 16 to 1, you may step across the Channel and find silver coined at $15\frac{1}{2}$ to 1 concurrent with gold as money of final settlement, i. e., as money with full legal-

tender force. But why is this possible? Simply because silver is *not* a co-standard in France any more than in England, although its relation to gold is somewhat different in the two countries: in both it is accessory and representative, but in France it has fuller swing in the circulation. If it were coined freely at such overvaluation it would drive the gold out as gold drove silver when the ratio under the co-standard *régime* in France overvalued the former. Butler's idea was that it makes no difference what your ratio is, so that it overvalues silver. He dare not, he said, put full value into the silver dollar, for fear it would become undervalued and exported: time has shown what foundation there was for his fears. However, it is safe enough to overvalue the silver coin so long as its mintage is restricted and made a state business: if coined freely at the overvaluation the silver is undoubtedly safe from exportation; but you have no more a co-standard than before; the gold stops circulating and you have a silver basis with an unmixed silver circulation.

The advocates of co-standard bimetallism undertake to fix the name "monometalist," as a brand of opprobrium, upon the adherents of the single standard: this is misleading and unjust; the most ardent partisans of gold as the standard contend warmly for a copious circulation of silver as a following and auxiliary money. It would do to call them mono-*standard*-ists (if the hybrid word is receivable); their first principle is unity and singleness of measure. But the one standard does not preclude the use of *two*, or more, metals as currency,—money of circulation: if necessary, aluminum might be added, either on the status of the silver dol-

lars or on that of the fractional pieces. It is for statesmen in finance to consider what is the limit of security in the monetary use of the secondary metal.

The Act of 1878 is spoken of properly enough as the remonetization of silver, i. e., as enlarging its use for money jointly with gold though on the basis of the latter. And when the partisans of silver argue, as some of them do openly, that their metal should be the standard, with gold as an auxiliary, they call *this* bimetallism. But when they write down the States of the Latin Union, the Netherlands, etc., as bimetallic, they do so with the implication that these countries maintain co-standards: their systems are adduced as of the same sort that the United States would have under free coinage of the metals at 16 to 1. This is untrue, as we have seen: rather are those nations, as monetary states, of the same class with the United States at present,—their silver coinages being restricted and subsidiary. Were it otherwise we should now see in those countries silver monometalism,—the standard silver and the currency throughout monometallic on the silver basis: which will yet be seen in the United States if that country follows the leading of its silver-tongued orators. The very men, therefore, who would bring their antagonists under condemnation as monometalists, relying on a want of discrimination in the public, are themselves most deserving of the epithet.

The revolution involved in the plans of the silver party would be as fruitless of public good as it would be reactionary and retrogressive in the choice of money material. The solid backing, if not the conscious motive, of the movement resides in the interests of silver

property which would secure an opening to the mints and so to a bigger market. But why should the interest of silver outweigh all other commercial interests? In magnitude it is among the least of them: no great agricultural or manufacturing,—yes, or mining,—interest but surpasses it in any of the leading countries of the world. Where its output is, relatively to other single products, of the greatest value, there is the fairest excuse for giving it precedence and conforming to its interests: though even there the advantage of coining it freely depends more on the special elements of the trade with gold countries. The value of the world's stock of it is far from augmenting proportionably with the bulk. Nor can a market be given it that will make it equally precious with gold,—not though all the nations of the earth should build upon it their currencies: a gold medal will always outshine and over-rank a silver medal, regardless of any positive convention. The relations of the values of two substances reside in the fixed natures of the substances and of man who estimates and compares them. Any attempt to reverse or alter the natural relations of any two things or entities must end in dead failure, preceded by more or less of disaster.

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